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ABSTRACT

Evaluating the 2nd-year K-3 bilingual program in 4 elementary schools, this document assessed (1) the increase in achievement level of Spanish-speaking pupils through use of a sustained K-3 program; (2) the student achievement level between bilingual and monolingual programs; (3) the involvement of Spanish-speaking parents as advisors and learners; (4) whether a 12-month 200-day school year serves the learner better than a 180-day regular school year; (5) the increase in measurable mental abilities of Spanish-cultural/linguistic-background children; (6) the enhancement of positive feelings of student self-worth; (7) the development of skills for bilingual-bicultural interaction; and (8) a school curriculum which utilized the culture and language of Spanish-background pupils. Two experimental groups and a control group were evaluated via appropriate forms of the California Short-Form Test of Mental Ability and the Metropolitan readiness and achievement tests, and 4 other instruments. Among the conclusions, it was found that females made greater gains than males in language growth, reading, and numerical reasoning; the control group made significant gains in grade 1 but not grade 2; summer instruction appears valuable for bilingual students in reading, word knowledge, and arithmetic; and pupil adjustment and parental-school contacts were insignificant. Four evaluation instruments are appended. [Not available in hard copy due to marginal legibility of original document.] (MJB)

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Evaluation of the Second Year (1968 - 1969) of the Sustained Primary Program for Bilingual Students in the Las Cruces, New Mexico Public School System

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TABLE OF CONTENTS

CHAPTER		PAGE
I.	INTRODUCTION	1
	Research Procedures	2
	Description of Evaluation Instruments	9
II.	RESULTS	15
	Experimental Group - Control Group Achievement Comparisons	15
	Experimental Spanish/English Group - Experimental English Group Achievement Comparisons	58
	Measurable Mental Ability Comparisons	63
	Pupil Adjustment Comparisons	67
	Parent-School Relations Comparisons	70
	Differentiated School Calendar Analysis	92
III.	CONCLUSIONS and IMPLICATIONS	105
	APPENDICES	110
	Parent Attitude Toward Education Scale	A
	Parent Information Record	B
	Pupil Behavior Rating Scale	C
	Parent Participation Record	D

CHAPTER I

INTRODUCTION

The purpose of this document is to present an evaluation of the second year of the Sustained Primary Program for Bilingual Students which was conducted in Las Cruces Public Schools during the 1968-69 academic year. The Program results were evaluated by personnel from the College of Education, New Mexico State University.

This report treats data obtained from the second year of operation and includes the schools and sample of students identified in the first report. The four schools participating in the Sustained Primary Program for Bilingual Students include Bradley Elementary School, Lucero Elementary School, Mesilla Elementary School and Washington Elementary School. The subjects included in this report include the first and second grades in the Sustained Primary Program who are treated as the experimental group and an approximately equal number of students in the regular first and second grades in these schools who were used as a control group. The evaluation concerned itself primarily with an assessment of the extent to which the Sustained Primary Program for Bilingual Students during its second year met the following primary objectives:

I. To increase the achievement level of Spanish-speaking pupils through the use of a sustained K-3 program.

II. To determine whether Spanish-speaking pupils achieve at a higher level in a program that utilizes instruction in both Spanish and English, or in a program utilizing English only.

III. To involve the parents of the Spanish-speaking students in the educational program as advisors and learners, thus enriching the home environment of the child.

IV. To determine whether a twelve month school year (200 school days) will serve the learner better than the regular school year (180 school days).

V. To increase the measurable mental abilities of children who have Spanish cultural/linguistic backgrounds.

VI. To help children develop positive feelings of self worth.

VII. To help children develop skills for bilingual-bicultural interaction.

VIII. To construct a school curriculum that utilizes the culture and language of Spanish background pupils.

Research Procedures:

The research design for evaluating the extent to which the Sustained Primary Program for Bilingual Students met these objectives in its second year involved two experimental groups and one control group and included Kindergarten, First Grade and Second Grade. The design is presented in Table I.

Evaluation Procedures:

The following procedures are set forth in an attempt to evaluate the second year of the primary program. The evaluation procedure will deal with each specific objective.

TABLE I

SAMPLE GROUPS INCLUDED IN RESEARCH

	Exp. Group I (English Only)	Exp. Group II (Spanish-English)	Control	
			Regular	Summer Lang. Prog.
Bradley School				
Kindergarten				
First Grade	20		14	12
Second Grade	18		9	9
Lucero School				
Kindergarten				
First Grade		17	5	6
Second Grade		16	6	6
Mesilla School				
Kindergarten				
First Grade		26	13	17
Second Grade		16	13	9
Washington School				
Kindergarten				
First Grade	25		14	8
Second Grade	17		8	4

Objective I (Part I)

To increase the achievement level of Spanish-speaking youngsters through the use of a sustained K-3 Program.

Hypothesis to be Tested

There is no significant difference between Spanish surnamed students in the Sustained Primary K-3 Experimental Program and students in the control group as measured by the Metropolitan Achievement Test and Metropolitan Reading Readiness Test.

Procedure for Testing Hypothesis

An analysis of covariance will be performed by sex, program and preschool experience for the following groups using the Metropolitan Achievement Test.

A. Experimental sustained K-3 vs. the Control group.
   1. Total K-3 group vs. total Control group
   2. 1st grade K-3 vs. 1st grade Control group
   3. 2nd grade K-3 vs. 2nd grade Control group

B. K-3 English experimental group vs. Control group
   1. Total K-3 English experimental group vs. total Control group
   2. 1st grade K-3 English vs. 1st grade Control group
   3. 2nd grade K-3 English vs. 2nd grade Control group

C. K-3 English/Spanish experimental program vs. Control group.
   1. Total K-3 English/Spanish vs. total Control group
   2. 1st grade K-3 English/Spanish vs. 1st grade Control group
   3. 2nd grade K-3 English/Spanish vs. 2nd grade Control group

B. 1st grade K-3 English/English vs. 1st grade K-3 English/Spanish using the Metropolitan Reading Readiness Test.

Objective III

To increase the measurable mental abilities of children who have Spanish cultural/linguistic backgrounds.

Hypothesis to be Tested (null form)

There are no statistically significant differences in measurable mental abilities, as measured by the California Test of Mental Maturity, between children of Spanish cultural/linguistic backgrounds in the K-3 sustained bilingual program and children in the Control group.

Procedure for Testing Hypothesis

A covariance analysis will be performed by sex, program and pre-school experience for first graders in the following groups.

A. Control vs. K-3 English/Spanish

B. Control vs. K-3 English/English

C. K-3 English/English vs. K-3 Spanish/English

Objective IV

To help children develop positive feelings of self worth.

Objective V

To help children develop skills for meaningful bilingual/bicultural interaction.

Hypothesis to be Tested (null form)

There are no statistically significant differences in feelings of

self worth and meaningful bilingual/bicultural interaction between Spanish-speaking students in the K-3 program and those in the Control group.

Procedure for Testing Hypothesis

Hypothesis will be tested by means of analysis of covariance, using the Pupil Behavior Rating Scale for the following groups by sex and preschool experience.

A. K-3 Bilingual group vs. Control group
   1. Total K-3 Bilingual group vs. total Control group
   2. 1st grade K-3 Bilingual group vs. 1st grade Control group
   3. 2nd grade K-3 Bilingual group vs. 2nd grade Control group

B. K-3 English/Spanish group vs. Control group
   1. Total K-3 English/Spanish vs. total Control group
   2. 1st grade K-3 English/Spanish group vs. 1st grade Control
   3. 2nd grade K-3 English/Spanish group vs. 2nd grade Control

C. K-3 English/English group vs. Control group
   1. Total English/English vs. total Control group
   2. 1st grade English/English vs. 1st grade Control group
   3. 2nd grade English/English vs. 2nd grade Control group

D. K-3 English/English vs. K-3 Spanish/English
   1. Total English/English vs. K-3 Spanish/English
   2. 1st grade English/English vs. K-3 Spanish/English
   3. 2nd grade English/English vs. 2nd grade K-3 Spanish/English

Objective VI

To improve home/school relationships so that parents may become more directly involved in the establishment of educational goals for themselves and their children.

Hypothesis to be Tested

There is no significant difference in parental involvement of parents of children participating in the K-3 Bilingual program and parents of children in the Control group.

Procedure for Testing Hypothesis

A. Hypothesis will be tested by a comparison of the number of contacts and nature of contacts that parents of children in the K-3 Bilingual program and Control program have with the school.

B. Hypothesis will be analyzed in terms of a comparison of parental attitude toward education (PATES) of parents of children in the K-3 Bilingual and Control groups.

Objective VII

To provide continuous educational experiences so that no time is lost in review of re-teaching.

Hypothesis to be Tested (null form)

There is no statistically significant difference in achievement between children in the K-3 Bilingual program (200 days) and children in the Control group (180 days) or children in the Control group with Summer Language Program (200 days) and children in the regular Control group (180 days).

Procedure for Testing Hypothesis

This hypothesis will be tested by an analysis of covariance for the following groups using the Metropolitan Achievement Test.

A. K-3 Bilingual program vs. regular Control
   1. Total K-3 vs. total regular Control
   2. K-3 1st grade vs. regular Control 1st grade
   3. K-3 2nd grade vs. regular Control 2nd grade

B. Summer Language Program Control vs. regular Control
   1. Total SLP Control vs. total regular Control
   2. 1st grade SLP Control vs. 1st grade regular Control
   3. 2nd grade SLP Control vs. 2nd grade regular Control

Description of Evaluation Instruments

California Short-Form Test of Mental Ability: Pre-Primary; Primary.

The California Short-Form Test of Mental Ability is a group ability test which is intended for use by a classroom teacher. The four mental factors it attempts to measure are: Spatial Relationships; Logical Reasoning; Numerical Reasoning; Verbal Concepts; and Language Data. The scores provided are Language Score, Non-language Score, and Total Score; each of which are expressed in terms of mental age and intelligence-quotients. The Pre-Primary and Primary forms are composed of the following sub-tests: (1) Sensing Right and Left; (2) Manipulation of Areas; (3) Similarities; (4) Inference; (5) Number Concepts; (6) Numerical Quantity; and (7) Verbal Concepts. The instructions for this test were given in English and Spanish to all students in order to insure that those students who did not comprehend English understood the direc-

tions. Two members of the research team, one of which was bilingual, administered all of the tests to insure consistancy of administration.

Metropolitan Readiness Test

The Metropolitan Readiness Tests were devised to measure the traits and achievement of school beginners which contribute to their readiness for first grade instruction. They were designed to test students at the completion of the kindergarten year or the beginning of the first grade. They are composed of six sub-tests, each of which consists of pictures that the pupil is to copy or mark according to the oral instructions given. Following is a description of the sub-tests:

Test 1.	Word Meaning	tests the pupil's understanding or comprehension of language.
Test 2.	Sentences	requires the pupil to comprehend phrases and sentences, making the test one of more sustained attention.
Test 3.	Information	is related to vocabulary. The pupil is required to select the picture which best suits the examiner's description.
Test 4.	Matching	a test of visual perception involving recognition of similarities.
Test 5.	Numbers	measures number knowledge.
Test 6.	Copying	measures visual perception and motor control such as is necessary for beginning writing. This type of test has proved to be diagnostic of mental maturity by disclosing spatial reversals.

Metropolitan Achievement Tests: Primary Batteries I and II.

The Metropolitan Achievement Tests are designed to measure a pupil's progress through his school experience. The authors have attempted to

build the test around the school curriculum. The Primary Batteries I and II are primarily for use in the latter half of grade one and grade two, respectively, and are meant to measure the pupil's achievement in reading and arithmetic. The following subtests from Primary Batteries I and II were selected: (1) Word Knowledge; (2) Word Discrimination; (3) Reading; (4) Arithmetic; and (5) Concepts and Skills. The results obtained from the subtests Word Knowledge and Word Discrimination offer an analytical value in planning reading instruction and identifying pupils warranting detailed diagnosis. The subtest Reading follows a multiple choice where the sentences have been chosen to be descriptive of pictures, objects, actions, or situations. The subtests Arithmetic and Concepts and Skills provide a comprehensive measure of the child's mastery of basic numerical and quantitative concepts such as are essential to understanding early stages of arithmetic and ability to solve oral problems; the results of which are uncontaminated by reading. Computational skills range from the reading and writing of single digits in simple addition and subtraction to basic addition and subtraction of three-place numbers.

Parent Attitude Toward Education Scale

The Parent Attitude Toward Education Scale was designed to be used with the parents of the children involved in the experimental program as well as non-project parents. The areas assessed are attitudes toward: (1) the instructional program; (2) parent-school relationships; (3) the value of education; (4) their own educational experiences; (5) teaching Spanish in the curriculum; (6) sustained school year; (7) parental involvement; and (8) level of aspiration for their child. The Parent

Attitude Toward Education Scale was presented in both English and Spanish. A copy of this scale may be found in Appendix A.

Parent Information Form

The Parent Information Form printed in Spanish and English, was designed to obtain information concerning the parents'age, education, income, occupation, and ages of children within the family. A copy of this form may be found in Appendix B.

Pupil Behavior Rating Scale

The Pupil Behavior Rating Scale consists of eleven items and was designed to obtain a behavior adjustment rating for each child by his classroom teacher. A copy of this scale is found in Appendix C.

Parent Participation Record

The Parent Participation Record enabled the classroom teacher to keep a record of parental involvement in the educational program of his child as indicated by conferences, PTA attendance, classroom visitations and home visits. A copy of this form is found in Appendix D.

Description of Subjects

The subjects utilized in the research were drawn from the following population:

1. Group IA-IB, English instruction only, with two first grade (IA) and two second grade (IB) classes, totaling approximately 80 pupils.
2. Group IIA-IIB, Spanish-English instruction, with two first grade (IIA) and two second grade (IIB) classes, totaling approximately 75 pupils.

3. Group III, Control Group, basal reader instruction. This group was comprised of all other first and second grade children in the four experimental schools, totaling approximately 153 pupils.

4. Parent Group I, parents of pupils enrolled in the English instructional portion of the K-3 project.

5. Parent Group II, parents of pupils enrolled in the Spanish-English instructional portion of the K-3 project.

6. Parent Group III, parents of all other first and second grade pupils in the experimental schools.

The criteria for selection of subjects to be utilized in the research were: (1) the subjects be of Mexican-American descent; (2) the second grade subjects were born in the year 1961; (3) the first grade subjects were born in the year 1962; (4) all pre-post mental ability, readiness, and achievement test data were obtained for the first and second grade subjects. Based on these criteria, the final selection was as presented in Table I. The testing schedule is presented in Table II.

TABLE II

K-3 EVALUATION SCHEDULE
FOR SCHOOL YEAR 1968-69

	GRADE I	GRADE II
CTMM CALIFORNIA TEST OF MENTAL MATURITY	ADMINISTERED: FALL, 1968 SPRING, 1969	
MRT METROPOLITAN READINESS TEST	ADMINISTERED: SEPT. 1968 DEC. 1968	
MAT METROPOLITAN ACHIEVEMENT TEST	ADMINISTERED: FALL, 1968 SPRING, 1969 FALL, 1969	ADMINISTERED: FALL, 1968 SPRING, 1969 FALL, 1969
PATES* PARENT ATTITUDE TOWARD EDUCATION SCALE	MAILED TO PARENTS: FEB. 1969	MAILED TO PARENTS: FEB. 1969
PPR PARENT PARTICIPATION RECORD	MAY, 1969	MAY, 1969
PBRS PUPIL BEHAVIOR RATING SCALE	MAY, 1969	MAY, 1969

*PIR (PARENT INFORMATION RECORD) INCLUDED AS A PART OF PATES

CHAPTER II

RESULTS

The purpose of this chapter is to present the findings of the second year of the Sustained Primary Program for Bilingual Students (K-3). The findings are analyzed in terms of the objectives set up in Chapter I. The data has been considered first across grade levels for the total sample in each group and, second, by grade levels to draw comparisons on achievement as reflected by gains per grade level.

Objective I

To increase the achievement level of pupils who have a Spanish linguistic-cultural background.

Hypothesis Tested

There is no statistically significant difference in achievement between students in the Sustained Primary Bilingual Program and those in the regular classrooms (Control Group) as measured by the Metropolitan Achievement Test and the Metropolitan Readiness Test.

Metropolitan Achievement Test

A. Sustained Primary Bilingual - Control Comparison

1. Total K-3 vs. Total Control (comparison across grade levels)

a. Analysis by Program

The main interest in doing this Analysis was to see whether, in general, there was any difference in gains according to the program the students were following. It was discovered that the students in the regular classrooms (the control group) had made greater gains in the following areas:

1) Word Knowledge
2) Word Discrimination
3) Reading
4) Arithmetic

b. This analysis was computed to find out if preschool experience made any difference in the gains made by boys and by girls as groups. It was found that in considering the total groups, there were no significant differences in gains between girls who had preschool experience and boys who had preschool experience.

2. First Grade K-3 compared with First Grade Control

a. Analysis by Program

The special interest behind this analysis was to find out which group of first graders made greater gains. It was found that the first graders in the control classrooms made greater gains than the students in the K-3 program in the following areas:

1) Word Knowledge
2) Word Discrimination
3) Reading
4) Arithmetic

b. Analysis by Preschool Experience

This analysis was made to see whether pupils having a preschool experience (Headstart or K-3 Kindergarten) made greater gains than those students having no preschool experience. The results indicate that:

1) First graders having no preschool experience made greater gains in arithmetic than those students that had the K-3 Kindergarten experience. No other significant differences were found.

2) First graders that had the Headstart preschool experience made greater gains in the areas listed below than first graders who had the K-3 Kindergarten experience:

1) Word Knowledge
2) Word Discrimination
3) Reading
4) Arithmetic

c. Analysis by Sex and Preschool Experience

Girls who had some preschool experience, either K-3 Kindergarten or Headstart, made greater gains than boys who had the preschool

experience. These differences were significant in areas measured by the following subtests:

1) Word Knowledge
2) Word Discrimination
3) Reading

3. Second Grade K-3 compared with Second Grade Control

a. Analysis by Program

This analysis was computed to see if there were any differences in gains between students in the K-3 program and those in the regular classrooms. It was found that there were no statistically significant differences in achievement gains in any of the areas.

b. Analysis by Preschool Experience

It was also found that there were no statistically significant differences in achievement gains when second graders who had preschool experience were compared with second graders who had no preschool experience.

B. K-3 English - Control Group Comparison

1. Total K-3 English vs. Total Control

a. Analysis by Program

The main interest that prompted this analysis was to see which group of students, those in the K-3 English section or the regular class, made greater gains as a total group across grades. It was found that the control group made greater gains in areas measured by the following subtests:

1) Reading
2) Arithmetic

b. Analysis by Preschool Experience

The variable of preschool experience was considered here in an effort to isolate its effect on achievement gains. It was found that when comparing the K-3 English subjects with the Control group that no statistically significant differences in gain were evident.

2. First Grade K-3 English - First Grade Control Comparison

a. Analysis by Program

A comparison of these two groups on achievement gains revealed that students in the regular classrooms made greater gains than the K-3 pupils in the areas measured by the following tests:

1) Word Knowledge
2) Word Discrimination
3) Reading
4) Arithmetic

b. Analysis by Preschool Experience

When comparing first grade students who had preschool experience with first grade students who had no preschool experience the following results were brought out by the analysis:

1) First grade pupils who had a Headstart experience demonstrated a greater gain in the following areas than students who had the K-3 Kindergarten experience:

a) Word Knowledge
b) Word Discrimination
c) Arithmetic

2) There was no difference in achievement gains between students who had a K-3 Kindergarten experience and those who had no kindergarten experience.

3) Girls who had a preschool experience made greater gains in the area of Word Knowledge.

3. Second Grade K-3 English - Control Group Comparison

When comparing the achievement gains of the second grade K-3 English subjects with the second grade control subjects, no significant differences were found when analyzed along the following dimensions:

1) Sex
2) Program, or treatment
3) Preschool experience
4) Sex-preschool experience

C. K-3 English/Spanish - Control Comparison

1. Total K-3 English/Spanish - Total Control Comparison

When comparisons were made using total subjects in each group

across grade levels the following results were found:

a. Analysis by Program

The control students, it was found, made greater gains than the K-3 English/Spanish students in the following areas:

1) Word Knowledge
2) Word Discrimination
3) Reading

b. Preschool Experience

In terms of an overall comparison of the two groups on the preschool dimension, the findings did not yield any significant differences in terms of achievement gain during the second year of the program.

2. First Grade K-3 English/Spanish - First Grade Control Comparison

a. Analysis by Program

Analysis of achievement gains in terms of these two treatments revealed that the first grade control group made significantly greater gains in the areas listed below than the first grade K-3 English/Spanish sample:

1) Word Discrimination
2) Reading
3) Arithmetic

b. Analysis by Preschool Experience

In comparing the first grade K-3 English/Spanish group with control first grade group in terms of the preschool experience, it was found that the students having no preschool experience made significantly greater gains in the following tests:

1) Word Discrimination
2) Arithmetic

It was also found that first graders who had a Headstart preschool experience gained significantly more in the following areas than those first graders having the K-3 English/Spanish Kindergarten experience.

1) Word Discrimination
2) Reading
3) Arithmetic

3. Second Grade K-3 English/Spanish - Control Comparison

No significant differences were found between these groups when viewed in terms of sex, preschool experience and sex-preschool experience. However, when viewed in terms of the program, it was discovered that the K-3 English/Spanish demonstrated higher achievement than the control in the areas of:

1) Word Discrimination
2) Arithmetic

Table III presents the significant findings for the comparisons made using the Fall and Spring Metropolitan Achievement Test data. Tables IV through XIX present the t-tests and F ratios used in computing Table III.

D. Differences Between Means at Pre-test and Post-test

The analysis of covariance provided a comparison of the gains made by the group. An analysis of significant differences between means was made to determine if there was any difference between groups in actual achievement in the pre test and post test. The Fall, 1968 Metropolitan Achievement Test was used as the pre test measure. The 1969 Spring Metropolitan Achievement Test was used as the post test measure. The results are presented in Tables XX through XXIII.

TABLE III

METROPOLITAN ACHIEVEMENT TEST

(9 MO. COMPARISON)

ADMINISTERED FALL, 1968 - SPRING 1969

ANALYSIS OF COVARIANCE AVAILABLE FOR THE VARIOUS GROUP COMPARISONS

SIGNIFICANT F RATIOS INDICATED

GROUP COMPARISON	WORD KNOWLEDGE	WORD DISCRIMINATION	READING	ARITHMETIC
TOTAL K-3 TOTAL CONTROL	S.05 (F) P.05 (C)	S.05 (F) P.05 (C)	S.05 (F) P.01 (C)	P.01 (C)
FIRST GR. K-3 FIRST GR. CONTROL	S.01 (F) P.01 (C)	S.05 (F) P.01 (C)	S.01 (F) P.01 (C)	P.01 (C)
FIRST GR. KINDERGARTEN FIRST GR. NO PRESCHOOL	S.01 (F)		S.01 (F) SxE.05 (FNE)	E.01 (NE)
FIRST GR. KINDERGARTEN FIRST GR. HEAD START	S.01 (F) E.01 (HS)	S.05 (F) E.01 (HS)	S.05 (F) E.01 (HS)	E.01 (HS)
FIRST GR. ENG. K-3 FIRST GR. CONTROL	S.01 (F) P.01 (C)	P.01 (C)	S.05 (F) P.01 (C)	P.01 (C)
FIRST GR. ENG. K FIRST GR. NO PRESCHOO.			S.01 (F)	E.01 (NE)
FIRST GR. ENG. K. FIRST GR. HEAD START	S.05 (F) E.01 (HS)	E.01 (HS)	E.01 (HS)	E.01 (HS)
FIRST GR. SP/ENG. K-3 FIRST GR. CONTROL	S.05 (F)	P.01 (C)	P.01 (C)	P.01 (C)
FIRST GR. S/ENG. K. FIRST GR. NO PRESCHOOL	S.01 (F)	S.05 (F) E.01 (NE)	S.01 (F) SxE.05 (FNE)	E.01 (NE)
FIRST GR. SP/ENG. K. FIRST GR. HEAD START	S.05 (F)	E.01 (HS)	E.01 (HS)	E.01 (HS)
SECOND GR. K-3 SECOND GR. CONTROL				
SECOND GR. ENG. K-3 SECOND GR. CONTROL				
SECOND GR. SP/ENG. K-3 SECOND GR. CONTROL		P.01 (S/E)		P.01 (S/E)
TOTAL ENG. K-3 TOTAL SP/ENG. K-3	S.05 (F) P.01 (ENG)		S.05 (F)	
FIRST GR. ENG. K-3 FIRST GR. SP/ENG. K-3	S.01 (F) P.05 (ENG)	S.01 (F)	S.01 (F) P.01 (ENG)	
SECOND GR. ENG. K-3 SECOND GR. SP/ENG. K-3	P.01 (C)			P.01 (S/E)
TOTAL ENG. K-3 TOTAL CONTROL			P.05 (C)	P.05 (C)
TOTAL SP/ENG. K-3 TOTAL CONTROL	P.01 (C)	S.05 P.05 (C)	S.05 P.01 (C)	

S = SEX: M- MALE, F- FENALE E = PRESCHOOL EXPERIENCE

P = PROGRAN: K - K-3 EXP.; C- CONTROL; ENG. -ENGLISH; SP/ENG - SPANISH-ENGLISH

SxP = SEX x PROGRAN

SxE = SEX x PRESCHOOL EXPERIENCE

TABLE IV

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF TOTAL K-3 PROGRAM AND TOTAL CONTROL PROGRAM

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND SPRING, 1969

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD KNOWLEDGE - SUB TEST					
SEX:					
MALE	43.37	1.98	1.76	2.31	.05
FEMALE	45.35				
PROGRAM:					
K-3	43.26	2.20	1.76	2.31	.05
CONTROL	45.46				
WORD DISCRIMINATION - SUB TEST					
SEX:					
MALE	45.23	2.02	1.60	2.11	.05
FEMALE	47.25				
PROGRAM:					
K-3	45.44	1.60	1.60	2.11	.05
CONTROL	47.04				
READING - SUB TEST					
SEX:					
MALE	43.31	2.18	1.66	2.18	.01
FEMALE	45.49				
PROGRAM:					
K-3	46.20	3.60	1.66	2.18	.01
CONTROL	42.60				
ARITHMETIC - SUB TEST					
PROGRAM:					
K-3	44.73	2.64	1.72	2.26	.01
CONTROL	47.37				

TABLE V

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON
FIRST GRADE K-3 PROGRAM WITH FIRST GRADE CONTROL PROGRAM

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND SPRING, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD KNOWLEDGE - SUB TEST					
SEX:					
MALE	42.13	3.43	2.08	2.76	.01
FEMALE	45.56				
PROGRAM:					
K-3	42.10	3.48	2.08	2.76	.01
CONTROL	45.58				
WORD DISCRIMINATION - SUB TEST					
SEX:					
MALE	43.10	2.46	2.00	2.64	.05
FEMALE	45.56				
PROGRAM:					
K-3	42.03	4.60	2.00	2.64	.01
CONTROL	46.63				
READING - SUB TEST					
SEX:					
MALE	41.37	2.86	2.10	2.79	.01
FEMALE	44.23				
PROGRAM:					
K-3	40.13	5.34	2.10	2.79	.01
CONTROL	45.47				
ARITHMETIC - SUB TEST					
PROGRAM:					
K-3	40.65	6.01	2.06	2.74	.01
CONTROL	46.66				

TABLE VI

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 PROGRAM WITH FIRST GRADE CONTROL STUDENTS HAVING NO PRESCHOOL EXPERIENCE

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND SPRING, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD KNOWLEDGE - SUB TEST					
SEX:					
MALE	40.51	4.94	2.49	3.31	.01
FEMALE	45.45				
READING - SUB TEST					
SEX:					
MALE	38.08	7.26	2.44	3.23	.01
FEMALE	45.34				
ARITHMETIC - SUB TEST					
PRESCHOOL EXPERIENCE:					
K-3 KINDERGARTEN	40.94	7.80	3.25	4.31	.01
NO PRESCHOOL EXPERIENCE	48.74				

TABLE VII

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 PROGRAM WITH FIRST GRADE CONTROL STUDENTS HAVING HEAD START PRESCHOOL EXPERIENCE

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND SPRING, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD KNOWLEDGE - SUB TEST					
SEX:					
MALE	42.44				
		3.26	2.16	2.84	.01
FEMALE	45.70				
PRESCHOOL EXPERIENCE					
K-3 KINDERGARTEN	42.24				
		3.66	2.16	2.84	.01
HEAD START	45.90				
WORD DISCRIMINATION - SUB TEST					
SEX:					
MALE	43.31				
		2.40	2.06	2.71	.05
FEMALE	45.71				
PRESCHOOL EXPERIENCE:					
K-3 KINDERGARTEN	42.12				
		4.78	2.06	2.71	.01
HEAD START	46.90				
READING - SUB TEST					
SEX:					
MALE	41.98				
		2.14	2.10	2.77	.05
FEMALE	44,12				
PRESCHOOL EXPERIENCE:					
K-3 KINDERGARTEN	40.30				
		5.50	2.19	2.79	.01
HEAD START	45.80				
ARITHMETIC - SUB TEST					
PRESCHOOL EXPERIENCE:					
K-3 KINDERGARTEN	40.80				
		5.78	1.72	2.27	.01
HEAD START	46.52				

TABLE VIII

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 ENGLISH WITH FIRST GRADE CONTROL PROGRAM

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND SPRING, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD KNOWLEDGE - SUB TEST					
SEX:					
MALE	42.68	3.62	2.46	3.25	.01
FEMALE	46.30				
PROGRAM:					
K-3 ENGLISH	42.06	4.86	2.61	3.46	.01
CONTROL	46.92				
WORD DISCRIMINATION - SUB TEST					
PROGRAM:					
K-3 ENGLISH	44.05	3.52	2.55	3.38	.01
CONTROL	47.57				
READING - SUB TEST					
SEX:					
MALE	41.75	3.30	2.57	3.41	.05
FEMALE	45.05				
PROGRAM:					
K-3 ENGLISH	41.38	4.04	2.75	3.64	.01
CONTROL	45.42				
ARITHMETIC - SUB TEST					
PROGRAM:					
K-3 ENGLISH	42.10	5.52	2.26	2.99	.01
CONTROL	47.62				

TABLE IX

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 ENGLISH PROGRAM WITH FIRST GRADE CONTROL STUDENTS HAVING NO PRESCHOOL EXPERIENCE

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND SPRING, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
READING - SUB TEST					
SEX:					
MALE	38.72	7.66	3.72	4.96	.01
FEMALE	46.38				
ARITHMETIC - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	44.42	6.08	3.98	5.31	.01
NO EXPERIENCE	50.50				

TABLE X

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 ENGLISH PROGRAM WITH FIRST GRADE CONTROL STUDENTS HAVING HEAD START PRESCHOOL EXPERIENCE

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND SPRING, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD KNOWLEDGE - SUB TEST					
SEX:					
MALE	43.21	3.52	2.57	3.41	.01
FEMALE	46.73				
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	42.36	5.22	2.69	3.56	.01
HEAD START	47.58				
WORD DISCRIMINATION - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	44.17	3.82	2.59	3.43	.01
HEAD START	47.99				
READING - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	41.62	4.14	2.65	3.51	.01
HEAD START	45.76				
ARITHMETIC - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	42.12	5.59	2.24	2.96	.01
HEAD START	47.71				

TABLE XI

T TEST FOR ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 SPANISH/ENGLISH PROGRAM WITH FIRST GRADE CONTROL PROGRAM

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND SPRING, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD KNOWLEDGE - SUB TEST					
SEX:					
MALE	41.63	3.37	2.48	3.28	.01
FEMALE	45.00				
WORD DISCRIMINATION - SUB TEST					
PROGRAM:					
K-3 SPANISH/ENGLISH	39.68	6.02	2.67	3.54	.01
CONTROL	45.70				
READING - SUB TEST					
PROGRAM:					
K-3 SPANISH/ENGLISH	38.53	6.86	2.71	3.59	.01
CONTROL	45.39				
ARITHMETIC - SUB TEST					
PROGRAM:					
K-3 SPANISH/ENGLISH	39.03	6.42	2.16	2.86	.01
CONTROL	45.45				

TABLE XII

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 SPANISH/ENGLISH STUDENTS WITH FIRST GRADE CONTROL STUDENTS HAVING NO PRESCHOOL EXPERIENCE

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND SPRING, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD KNOWLEDGE - SUB TEST					
SEX:					
MALE	38.09	5.28	3.30	4.40	.01
FEMALE	43.37				
WORD DESCRIMINATION - SUB TEST					
SEX:					
MALE	38.54	4.52	3.26	4.34	.01
FEMALE	43.06				
PRESCHOOL EXPERIENCE:					
SPANISH/ENGLISH EXPERIENCE	37.92	5.76	3.78	5.04	.01
NO PRESCHOOL EXPERIENCE	43.68				
READING - SUB TEST					
SEX:					
MALE	37.76	6.58	3.36	4.48	.01
FEMALE	44.34				
ARITHMETIC - SUB TEST					
PRESCHOOL EXPERIENCE:					
SPANISH/ENGLISH KINDERGARTEN	37.19	8.86	3.36	4.48	.01
NO PRESCHOOL	46.05				

TABLE XIII

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 SPANISH/ENGLISH PROGRAM WITH FIRST GRADE STUDENTS HAVING HEAD START PRESCHOOL EXPERIENCE

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND SPRING, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD KNOWLEDGE - SUB TEST					
SEX:					
MALE	41.48	3.28	2.61	3.53	.05
FEMALE	44.76				
WORD DISCRIMINATION - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	39.75	6.12	2.67	3.54	.01
HEAD START	45.87				
READING - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	38.60	7.04	2.64	3.49	.01
HEAD START	45.64				
ARITHMETIC - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	39.11	5.78	2.09	2.76	.01
HEAD START	44.89				

TABLE XIV

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF SECOND GRADE K-3 SPANISH/ENGLISH PROGRAM WITH SECOND GRADE CONTROL PROGRAM

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND SPRING, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD DISCRIMINATION - SUB TEST					
PROGRAM:					
SECOND GRADE:					
K-3 SPANISH/ENGLISH	52.21	4.44	1.99	2.63	.01
CONTROL	47.78				
ARITHMETIC - SUB TEST					
PROGRAM:					
SECOND GRADE:					
K-3 SPANISH/ENGLISH	55.45	6.08	1.99	2.63	.01
CONTROL	49.37				

TABLE XV

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF TOTAL ENGLISH K-3 PROGRAM WITH TOTAL SPANISH K-3 PROGRAM

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND SPRING, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD KNOWLEDGE - SUB TEST					
SEX:					
MALE	42.40	2.38	2.00	2.63	.05
FEMALE	44.78				
PROGRAM:					
K-3 ENGLISH	45.13	3.08	2.00	2.63	.01
K-3 SPANISH	42.05				
READING - SUB TEST					
SEX:					
MALE	41.85	2.08	1.84	2.42	.05
FEMALE	43.93				

TABLE XVI

T TEST FOR ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 ENGLISH PROGRAM WITH FIRST GRADE K-3 SPANISH/ENGLISH PROGRAM

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND SPRING, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.05	P
WORD KNOWLEDGE - SUB TEST					
SEX:					
MALE	33.14				
		4.94	2.67	3.54	.01
FEMALE	38.08				
WORD DISCRIMINATION - SUB TEST					
SEX:					
MALE	40.21				
		3.38	2.39	3.17	.01
FEMALE	43.59				
PROGRAM:					
K-3 ENGLISH	43.55				
		3.30	2.39	3.17	.01
K-3 SPANISH/ENGLISH	40.25				
READING - SUB TEST					
SEX:					
MALE	38.63				
		3.22	2.31	3.06	.01
FEMALE	41.85				
PROGRAM:					
K-3 ENGLISH	42.03				
		3.58	2.31	3.06	.01
K-3 SPANISH/ENGLISH	38.45				

TABLE XVII

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF SECOND GRADE K-3 ENGLISH PROGRAM WITH SECOND GRADE K-3 SPANISH PROGRAM

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND SPRING, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD KNOWLEDGE - SUB TEST					
PROGRAM:					
K-3 ENGLISH	48.19				
		4.48	2.46	3.27	.01
K-3 SPANISH	43.71				
ARITHMETIC - SUB TEST					
PROGRAM:					
K-3 ENGLISH	50.27				
		7.80	2.97	3.96	.01
K-3 SPANISH					

TABLE XVIII

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF TOTAL SPANISH K-3 PROGRAM WITH TOTAL CONTROL PROGRAM

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND SPRING, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD KNOWLEDGE - SUBTEST					
PROGRAM:					
CONTROL	45.51				
		3.94	2.30	3.04	.01
SPANISH K-3	41.57				
WORD DISCRIMINATION - SUB TEST					
SEX:					
MALE	46.11				
		2.18	1.95	2.57	.05
FEMALE	48.29				
PROGRAM:					
SPANISH K-3	46.05				
		2.30	2.08	2.75	.05
CONTROL	48.35				
READING - SUB TEST					
SEX:					
MALE	42.61				
		2.38	2.08	2.73	.05
FEMALE	44.99				
PROGRAM:					
SPANISH K-3	41.63				
		4.34	2.23	2.94	.01
CONTROL	45.97				

TABLE XIX

t Test of Adjusted Means with Significant F Ratios for Comparison of Total English K-3 Program with Total Control Program

Metropolitan Achievement Test (Adm. Fall, 1968 and Spring, 1969)

Sample Group	Adjusted Mean	Mean Diff.	t Test Critical Diff. .05	.01	P
Reading - Sub Test					
Program:					
English K-3	43.06	2.78	2.12	2.78	.01
Control	45.84				
Arithmetic - Sub Test					
Program:					
English K-3	44.70	2.68	2.08	2.73	.05
Control	47.38				

TABLE XX

SIGNIFICANT DIFFERENCES BETWEEN MEANS - COMPARISON OF FIRST GRADE K-3 SPANISH/ENGLISH WITH FIRST GRADE CONTROL

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND SPRING, 1969)

	FALL, 1968				SPRING, 1969			
SAMPLE GROUP	MEANS	MEAN DIFF.	CRITICAL RATIO	P	MEANS	MEAN DIFF.	CRITICAL RATIO	P
WORD KNOWLEDGE - SUB TEST								
SPANISH/ENGLISH	29.33	4.48	5.27	.01	38.55	7.54	5.09	.01
CONTROL	33.81				46.09			
WORD DISCRIMINATION - SUB TEST								
SPANISH/ENGLISH	30.95	3.32	3.91	.01	37.59	9.17	6.90	.01
CONTROL	34.27				46.76			
READING - SUB TEST								
SPANISH/ENGLISH	33.41	1.87	1.95	NS	38.69	6.63	5.90	.01
CONTROL	31.61				45.32			
ARITHMETIC - SUB TEST								
SPANISH/ENGLISH	26.62	3.30	2.94	.01	36.64	9.74	6.71	.01
CONTROL	29.92				46.38			

TABLE XXI

SIGNIFICANT DIFFERENCES BETWEEN MEANS - COMPARISON OF
SECOND GRADE K-3 SPANISH/ENGLISH WITH SECOND GRADE CONTROL

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND SPRING, 1969)

	FALL, 1968				SPRING, 1969			
SAMPLE GROUP	MEANS	MEAN DIFF.	CRITICAL RATIO	P	MEAN	MEAN DIFF.	CRITICAL RATIO	P
WORD KNOWLEDGE - SUB TEST								
SPANISH/ENGLISH	45.87	.47	.25	NS	43.91	1.84	.92	NS
CONTROL	46.44				45.75			
WORD DISCRIMINATION - SUB TEST								
SPANISH/ENGLISH	47.31	1.25	.59	NS	52.78	5.22	2.57	.05
CONTROL	46.06				47.56			
READING - SUB TEST								
SPANISH/ENGLISH	46.06	.80	.42	NS	46.56	.38	.18	NS
CONTROL	46.86				46.94			
ARITHMETIC - SUB TEST								
SPANISH/ENGLISH	50.50	1.03	.46	NS	55.37	6.64	2.48	.05
CONTROL	49.47				48.73			

49.39

49.94

TABLE XXII

SIGNIFICANT DIFFERENCES BETWEEN MEANS - COMPARISON OF FIRST GRADE K-3 ENGLISH WITH FIRST GRADE CONTROL

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND SPRING, 1969)

	FALL, 1968				SPRING, 1969			
SAMPLE GROUP	MEANS	MEAN DIFF.	CRITICAL RATIO	P	MEANS	MEAN DIFF.	CRITICAL RATIO	P
WORD KNOWLEDGE - SUB TEST								
K-3 ENGLISH	36.38	2.57			44.87	1.22	.71	
CONTROL	33.81				46.09			
WORD DISCRIMINATION - SUB TEST								
K-3 ENGLISH	37.07	2.80			46.31	.45	.28	
CONTROL	34.27				46.76			
READING - SUB TEST								
K-3 ENGLISH	35.93	4.32		.01	42.24	3.08	2.43	.05
CONTROL	31.61				45.32			
ARITHMETIC - SUB TEST								
K-3 ENGLISH	34.31	4.39		.01	45.18	1.20	.82	
CONTROL	29.92				46.38			

TABLE XXIII

SIGNIFICANT DIFFERENCES BETWEEN MEANS - COMPARISON OF SECOND GRADE K-3 ENGLISH WITH SECOND GRADE CONTROL

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND SPRING, 1969)

	FALL, 1968				SPRING, 1969			
SAMPLE GROUP	MEANS	MEAN DIFF.	CRITICAL RATIO	P	MEANS	MEAN DIFF.	CRITICAL RATIO	P
WORD KNOWLEDGE - SUB TEST								
K-3 ENGLISH	45.50	.94	.53		47.94	2.19	1.31	
CONTROL	46.44				45.75			
WORD DISCRIMINATION - SUBTEST								
K-3 ENGLISH	43.74	2.32	1.30		47.46	.10	.06	
CONTROL	46.06				47.56			
READING - SUB TEST								
K-3 ENGLISH	45.14	1.72	1.07		46.20	.74	.46	
CONTROL	46.86				46.94			
ARITHMETIC - SUB TEST								
K-3 ENGLISH	49.66	.19	.09		46.97	1.76	.89	
CONTROL	49.47				48.73			

Metropolitan Readiness Test

A. Total K-3 - Total Control

1. Analysis by Program

When an analysis was made of gains in achievement of the two groups as measured by the Metropolitan Readiness Test, it was found that the first graders in the control group made greater gains than the K-3 first graders in the areas of:

1) Word Meaning
2) Numbers
3) Copying
4) Alphabet
5) Total

2. Analysis by Preschool Experience

Analyses based on preschool experiences yielded the following significant differences in gained achievement.

a. Students having no preschool experience made greater gains in the areas listed below than the first grade students having had a K-3 Kindergarten experience:

1) Word Meaning
2) Copying
3) Total

b. Students having a Headstart preschool experience made greater gains in the areas listed below than first graders having a K-3 Kindergarten experience:

1) Word Meaning
2) Matching
3) Alphabet
4) Numbers
5) Copying
6) Total

c. Girls who had preschool experience (Kindergarten or Headstart) made greater gains in the Alphabet subtest than boys with preschool experience.

B. K-3 English - Control Comparison

1. Analysis by Program

On this analysis first grade students in the control group made greater gains than the K-3 English group in the following areas:

1) Copying
2) Total

2. Analysis by Preschool Experience

An analysis of gains by preschool experience yielded the following results:

a. Students having no preschool experience made greater gains in the areas listed below than the students having a K-3 English Kindergarten experience:

1) Copying
2) Total

b. Students having a Headstart experience made greater gains than students having a K-3 English Kindergarten experience in the areas listed below:

1) Numbers
2) Copying
3) Total

c. Girls having preschool experience (either K-3 Kindergarten or Headstart) made greater gains in Alphabet and Total subtests than boys who had preschool experience.

C. K-3 English/Spanish - Control Group Comparison

1. Analysis by Program

An analysis of students by program revealed that the control students in the regular classroom demonstrated a greater gain than students who had a K-3 Spanish/English Kindergarten experience. This gain was significantly different in the areas measured by the following subtests:

1) Listening
2) Word Meaning
3) Matching
4) Alphabet
5) Numbers
6) Copying
7) Total

2. Analysis by Preschool Experience

Students having no preschool experience made greater gains than those students having the K-3 Spanish/English Kindergarten. The following subtests indicate these significant differences.

1) Alphabet
2) Copying
3) Total

Students having a Headstart preschool experience made greater gains than the K-3 Spanish/English group in the areas indicated by the following subtests:

1) Word Meaning
2) Listening
3) Matching
4) Numbers
5) Copying
6) Total

Achievement Gains by Sex

A. This aspect is included in this report because the sex variable has proven by other research to be an important factor in learning. This variable also seems to be an important factor to consider when studying achievement among Mexican-American students. In terms of the sex variable, the following findings were significant as measured by the Metropolitan Achievement Test.

1. An analysis of the total K-3 - total Control groups revealed that girls, regardless of what program they were in, gained significantly better than boys in the following areas:

   1) Word Discrimination
   2) Word Knowledge
   3) Reading

2. The same findings held true when considering sex as a variable for first graders.

3. There were no significant gains according to sex when considering total groups during second grade.

4. The first grade K-3 English - Control comparison revealed that girls made significantly greater gains than boys in Word Knowledge and Reading. However, no difference was found for second graders on this comparison.

5. The first grade K-3 English/Spanish - Control Group comparison revealed that girls gained significantly more than boys in the areas of Word Knowledge and Word Discrimination. However, again, there were no differences in gain between second grade girls and second grade boys.

B. An analysis of achievement among first graders as measured by the Metropolitan Readiness Test found the following findings to be significant when analyzed in terms of the sex variable.

1. Girls demonstrated greater gains than boys in the area measured by the Alphabet subtest.

Table XXIV presents the significant findings of the analysis of covariance done on the Metropolitan Readiness Test for all groups. Tables XXV through XXXIV present the t-tests and F ratios used to compute Table XXIV.

TABLE XXIV

FIRST GRADE 1968-69
METROPOLITAN READINESS TEST

ANALYSIS OF COVARIANCE AVAILABLE FOR THE VARIOUS COMPARISONS
SIGNIFICANT F RATIOS INDICATED

GROUP COMPARISON	WORD MEANING	LISTENING	MATCHING	ALPHABET	NUMBERS	COPYING	TOTAL
K-3 CONTROL	P.05(C)		P.05(C)	S.01(F) P.01(C)	P.01(C)	P.01(C)	P.01(C)
KINDERGARTEN NO PRESCHOOL				E.01 SxE.05(FK&HS)		E.01	S.05 E.01 SxE.01(MK)
KINDERGARTEN VS HEAD START	E.05(HS)		E.05(HS)	S.01(F) E.01(HS)	E.01(HS)	E.01(HS)	S.05(M) E.01(HS)
K-3 ENGLISH VS CONTROL				S.01(F)		P.05(K-3)	P.01(K-3)
K-3 ENGLISH VS NO PRESCHOOL						E.05(NE)	E.05(NE) SxE.05(ENE)
K-3 ENGLISH VS HEAD START				S.01(F)	E.05(HS)	E.05(HS)	E.01(HS)
K-3 SPANISH/ENGLISH VS CONTROL	P.01(C)	P.01(C)	P.01(C)	S.05(F) P.01(C)	P.01(C)	P.01(C)	P.01(C)
K-3 SPANISH/ENGLISH VS NO PRESCHOOL				E.01(NE)	E.05(NE)	E.01(NE)	E.01(NE) SxE.05(FK-3,HS)
K-3 SPANISH/ENGLISH VS HEAD START	E.01(HS)	E.01(HS)	E.01(HS)	S.01(F) E.01(HS)	E.01(HS)	E.01(HS)	S.05(F) E.01(HS)
K-3 ENGLISH VS K-3 SPANISH/ENGLISH	P.01(ENG)	P.01(ENG) SxP.05	P.01(ENG)	S.01(F) P.01(ENG)		P.05(ENG)	P.05(ENG)

S = SEX: F- FEMALE; M- MALE
P = PROGRAM: K-3 - EXPERIMENTAL; C- CONTROL
SxP = SEX x PROGRAM
E = PRESCHOOL EXPERIENCE: K- KINDERGARTEN; NE- NO EXPERIENCE; HS- HEAD START
SxE = SEX x PRESCHOOL EXPERIENCE

TABLE XXV

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 PROGRAM WITH FIRST GRADE CONTROL PROGRAM

METROPOLITAN READINESS TEST

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD MEANING - SUB TEST					
PROGRAM:					
K-3 FIRST GRADE	6.98				
		.75	.63	.84	.05
CONTROL FIRST GRADE	7.73				
MATCHING - SUB TEST					
PROGRAM:					
K-3 FIRST GRADE	10.18				
		.78	.69	.91	.05
CONTROL FIRST GRADE	10.96				
ALPHABET - SUB TEST					
SEX:					
MALE, FIRST GRADE	11.07				
		1.54	.95	1.25	.01
FEMALE, FIRST GRADE	12.61				
PROGRAM:					
K-3 FIRST GRADE	10.76				
		2.16	.95	1.25	.01
CONTROL FIRST GRADE	12.92				
NUMBERS - SUB TEST					
PROGRAM:					
K-3 FIRST GRADE	13.57				
		2.04	.37	.44	.01
CONTROL FIRST GRADE	15.61				
COPYING - SUB TEST					
PROGRAM:					
K-3 FIRST GRADE	8.44				
		1.74	.71	.94	.01
CONTROL FIRST GRADE	10.18				
TOTAL					
PROGRAM:					
K-3 FIRST GRADE	59.80				
		9.24	2.49	3.29	.01
CONTROL FIRST GRADE	69.04				

TABLE XXVI

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 PROGRAM WITH FIRST GRADE CONTROL STUDENTS HAVING NO PRESCHOOL EXPERIENCE

METROPOLITAN READINESS TEST

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
ALPHABET - SUB TEST					
PRESCHOOL EXPERIENCE:					
K-3 PROGRAM	11.42				
		3.26	1.70	2.63	.01
NO PRESCHOOL EXPERIENCE	14.68				
COPYING - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	8.79				
		1.92	1.23	1.63	.01
NO EXPERIENCE	10.71				
TOTAL					
SEX:					
MALE	69.18				
		4.56	2.85	3.79	.01
FEMALE	64.62				
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	61.43				
		10.94	4.16	5.52	.01
NO EXPERIENCE	72.37				

TABLE XXVII

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 PROGRAM WITH FIRST GRADE CONTROL STUDENTS HAVING HEAD START PRESCHOOL EXPERIENCE

METROPOLITAN READINESS TEST

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD MEANING - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	6.97	.82	.65	.86	.05
HEAD START	7.79				
MATCHING - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	10.23	.78	.71	.94	.05
HEAD START	11.01				
ALPHABET - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	10.80	2.16	.99	1.31	.01
HEAD START	12.96				
SEX:					
MALE					
FEMALE					
NUMBERS - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	13.73	2.08	1.09	1.44	.01
HEAD START	15.81				
COPYING - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	8.48	1.76	.77	1.02	.01
HEAD START	10.24				
TOTAL					
SEX:					
MALE	62.91	3.32	2.55	3.37	.05
FEMALE	66.23				
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	59.78	9.58	2.55	3.37	.01
HEAD START	69.36				

TABLE XXVIII

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 ENGLISH PROGRAM WITH FIRST GRADE CONTROL PROGRAM

METROPOLITAN READINESS TEST

SAMPLE GROUP	ADJUSTED MEANS	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
ALPHABET - SUB TEST					
SEX:					
MALE	11.93				
		1.54	1.01	1.33	.01
FEMALE	13.47				
COPYING - SUB TEST					
PROGRAM:					
K-3 ENGLISH	9.15				
		1.04	.87	1.15	.05
CONTROL	10.19				
TOTAL					
PROGRAM:					
K-3 ENGLISH	64.16				
		5.76	2.95	3.89	.01
CONTROL	69.92				

TABLE XXIX

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 ENGLISH STUDENTS WITH FIRST GRADE CONTROL STUDENTS HAVING NO PRESCHOOL EXPERIENCE

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
METROPOLITAN READINESS TEST					
COPYING - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	9.70				
		1.52	1.53	.05	
NO EXPERIENCE	11.22				
TOTAL					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	69.53				
		5.42	3.66	4.88	.01
NO PRESCHOOL	74.95				

TABLE XXX

T TEST OF ADJUSTED MEANS WITH SIGNIFICATN F RATIOS FOR COMPARISON OF FIRST GRADE K-3 ENGLISH STUDENTS WITH FIRST GRADE CONTROL STUDENTS HAVING HEAD START EXPERIENCE

METROPOLITAN READINESS TEST

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
ALPHABET - SUB TEST					
SEX:					
MALE	11.85				
FEMALE	13.61	1.76	1.05	1.39	.01
NUMBERS - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	14.56				
HEAD START	16.12	1.56	1.31	1.73	.05
COPYING - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	9.20				
HEAD START	10.24	1.04	.89	1.18	.05
TOTAL					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	64.01				
HEAD START	70.61	6.60	3.01	3.98	.01

TABLE XXXI

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 SPANISH/ENGLISH WITH FIRST GRADE CONTROL PROGRAM

METROPOLITAN READINESS TEST

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD MEANING - SUB TEST					
PROGRAM:					
K-3 SPANISH/ENGLISH	6.25	1.45	.75	.99	.01
CONTROL	7.70				
LISTENING - SUB TEST					
PROGRAM:					
K-3 SPANISH/ENGLISH	8.94	1.92	.89	1.98	.01
CONTROL	10.86				
MATCHING - SUB TEST					
PROGRAM:					
K-3 SPANISH/ENGLISH	9.14	1.37	.91	1.21	.01
CONTROL	10.51				
ALPHABET - SUB TEST					
SEX:					
MALE	9.80	1.51	1.13	1.50	.01
FEMALE	11.31				
PROGRAM:					
K-3 SPANISH/ENGLISH	8.88	3.34	1.23	1.63	.01
CONTROL	12.22				
NUMBERS - SUB TEST					
PROGRAM:					
K-3 SPANISH/ENGLISH	12.55	2.46	1.36	1.80	.01
CONTROL	15.01				
COPYING - SUB TEST					
PROGRAM:					
K-3 SPANISH/ENGLISH	7.41	2.38	.92	1.21	.01
CONTROL	9.79				
TOTAL					
PROGRAM:					
K-3 SPANISH/ENGLISH	54.24	11.56	3.29	4.37	.01
CONTROL	65.80				

TABLE XXXII

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 SPANISH/ENGLISH STUDENTS WITH FIRST GRADE CONTROL STUDENTS HAVING NO PRESCHOOL EXPERIENCE

METROPOLITAN READINESS TEST

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
ALPHABET - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	8.93				
		4.30	2.05	2.73	.01
NO PRESCHOOL EXPERIENCE	13.23				
NUMBERS - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	12.07				
		2.32	2.21	2.95	.05
NO PRESCHOOL	14.39				
COPYING - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	7.53				
		2.34	1.43	1.90	.01
NO PRESCHOOL	9.87				
TOTAL					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	53.24				
		12.52	5.07	6.75	.01
NO PRESCHOOL	65.76				

TABLE XXXIII

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 SPANISH/ENGLISH STUDENTS WITH FIRST GRADE CONTROL STUDENTS HAVING HEAD START PRESCHOOL EXPERIENCE

METROPOLITAN READINESS TEST

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD MEANING - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	6.15	1.54	.77	1.02	.01
HEAD START	7.69				
LISTENING - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	8.92	2.06	.73	.97	.01
HEAD START	10.98				
MATCHING - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	9.16	1.36	.95	1.26	.01
HEAD START	10.52				
ALPHABET - SUB TEST					
SEX:					
MALE	9.58	1.84	1.21	1.60	.01
FEMALE	11.42				
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	8.88	3.24	1.27	1.68	.01
HEAD START	12.12				
NUMBERS - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	12.63	2.52	1.39	1.83	.01
HEAD START	15.15				
COPYING - SUB TEST					
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	7.42	2.42	.95	1.26	.01
HEAD START	9.80				

TABLE XXXIII (CONTINUED)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
TOTAL					
SEX:					
MALE	58.22	3.76	3.21	4.24	.05
FEMALE	61.98				
PRESCHOOL EXPERIENCE:					
KINDERGARTEN	54.40	11.40	3.37	4.45	.01
HEAD START	65.80				

TABLE XXXIV

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 ENGLISH PROGRAM WITH FIRST GRADE K-3 SPANISH/ENGLISH PROGRAM

METROPOLITAN READINESS TEST

SAMPLE GROUP	ADJUSTED MEANS	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD MEANING - SUB TEST					
PROGRAM:					
K-3 ENGLISH	7.86				
		1.78	.89	1.19	.01
K-3 SPANISH/ENGLISH	6.08				
LISTENING - SUB TEST					
PROGRAM:					
K-3 ENGLISH	11.01				
		1.49	.87	1.15	.01
K-3 SPANISH/ENGLISH	9.52				
MATCHING - SUB TEST					
PROGRAM:					
K-3 ENGLISH	9.51				
		1.96	.88	2.33	.05
K-3 SPANISH/ENGLISH	11.47				
COPYING - SUB TEST					
PROGRAM:					
K-3 ENGLISH	9.54				
		1.34	.93	1.24	.01
K-3 SPANISH/ENGLISH	8.20				
TOTAL					
PROGRAM:					
K-3 ENGLISH	64.81				
		4.66	3.10	4.11	.01
K-3 SPANISH/ENGLISH	60.15				

Objective II

To determine whether Spanish-speaking students achieve more in a program that utilizes instruction in both Spanish and English or in a program that is taught in English only. Tables XXXV and XXXVI present the comparison of significant differences between means obtained through the Metropolitan Achievement Tests administered to first and second graders in Fall, 1968, Spring, 1969 and Fall, 1969 tests.

Metropolitan Achievement Test (Fall, 1968 - Spring, 1969)

A. Total K-3 Spanish/English - K-3 English Comparison

Using a total group comparison, it was found that the K-3 English group made significantly greater gains than the K-3 Spanish/English group in Word Knowledge only.

B. First Grade K-3 Spanish/English - K-3 English Comparison

Comparing groups of first graders, it was found that the K-3 English group made significantly greater gains than the K-3 English/Spanish group in the areas of Word Discrimination and Reading.

C. Second Grade K-3 Spanish/English - K-3 English Comparison

An analysis of second graders in the program revealed that:

1) The K-3 English group made significantly greater gains than the K-3 Spanish/English group in Word Knowledge.

2) The K-3 Spanish/English group made significantly greater gains than the K-3 English group in the area of Arithmetic.

D. Analysis by Sex

An analysis of achievement by sex of pupils in the Sustained Primary Program for Bilingual Students revealed the following findings:

1) Total - girls made significantly greater gains than boys in the areas of Word Knowledge and Reading.

2) First Grade - girls made greater gains than boys in the areas of Word Knowledge, Word Discrimination and Reading.

TABLE XXXV

METROPOLITAN ACHIEVEMENT TEST
(ADM. FALL, 1968, SPRING, 1969 AND FALL, 1969)
FIRST GRADE
COMPARISON OF SIGNIFICANT DIFFERENCES BETWEEN MEANS

K-3 SPANISH/ENGLISH VS K-3 ENGLISH ANALYSIS

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	CRITICAL RATIO	P
FALL, 1968				
WORD KNOWLEDGE - SUB TEST				
SPANISH/ENGLISH	29.33	7.05	7.19	.01
ENGLISH	36.38			
WORD DISCRIMINATION - SUB TEST				
SPANISH/ENGLISH	30.93	6.27	6.46	.01
ENGLISH	37.20			
READING - SUB TEST				
SPANISH/ENGLISH	33.51	2.31	2.84	.01
ENGLISH	35.82			
ARITHMETIC - SUB TEST				
SPANISH/ENGLISH	26.63	7.90	6.75	.01
ENGLISH	34.53			
SPRING, 1969				
WORD KNOWLEDGE - SUB TEST				
SPANISH/ENGLISH	44.87	6.32	3.72	.01
ENGLISH	38.55			
WORD DISCRIMINATION - SUB TEST				
SPANISH/ENGLISH	46.31	8.72	5.81	.01
ENGLISH	37.59			
READING - SUB TEST				
SPANISH/ENGLISH	42.24	3.60	3.05	.01
SPANISH	38.69			
ARITHMETIC - SUB TEST				
SPANISH/ENGLISH	45.18	8.54	5.40	.01
ENGLISH	36.64			

TABLE XXXV (CONTINUED) PAGE 2

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	CRITICAL RATIO	P
FALL, 1969				
WORD KNOWLEDGE - SUB TEST				
SPANISH/ENGLISH	34.26 39.24	10.34	5.60	.01
ENGLISH	49.60			
WORD DISCRIMINATION - SUB TEST				
SPANISH/ENGLISH	40.53	9.23	4.86	.01
ENGLISH	49.76			
READING - SUB TEST				
SPANISH/ENGLISH	37.95	9.69	5.67	.01
ENGLISH	47.64			
ARITHMETIC - SUB TEST				
SPANISH/ENGLISH	40.98	9.33	6.30	.01
ENGLISH	50.31			

TABLE XXXVI

METROPOLITAN ACHIEVEMENT TEST
(ADM. FALL, 1968, SPRING, 1969 AND FALL, 1969)
SECOND GRADE
COMPARISON OF SIGNIFICANT DIFFERENCES BETWEEN MEANS

K-3 SPANISH/ENGLISH VS. K-3 ENGLISH ANALYSIS

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	CRITICAL RATIO	P
FALL, 1968				
WORD KNOWLEDGE - SUB TEST				
SPANISH/ENGLISH	45.87	.47	.22	NS
ENGLISH	45.40			
WORD DISCRIMINATION - SUB TEST				
SPANISH/ENGLISH	47.31	3.57	1.67	NS
ENGLISH	43.74			
READING - SUB TEST				
SPANISH/ENGLISH	46.06	.92	.47	NS
ENGLISH	45.14			
ARITHMETIC - SUB TEST				
SPANISH/ENGLISH	50.50	.94	.38	NS
ENGLISH	49.66			
SPRING, 1969				
WORD KNOWLEDGE - SUB TEST				
SPANISH/ENGLISH	43.91	4.03	2.10	.05
ENGLISH	47.94			
WORD DISCRIMINATION - SUB TEST				
SPANISH/ENGLISH	52.78	5.32	2.51	.05
ENGLISH	47.46			
READING - SUB TEST				
SPANISH/ENGLISH	46.56	.36	.19	NS
ENGLISH	46.20			
ARITHMETIC - SUB TEST				
SPANISH/ENGLISH	55.37	8.40	3.07	.01
ENGLISH	46.97			

TABLE XXXVI (CONTINUED) PAGE 2

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	CRITICAL RATIO	P
FALL, 1969				
WORD KNOWLEDGE - SUB TEST				
SPANISH/ENGLISH	46.78			
		1.11	.55	NS
ENGLISH	47.89			
WORD DISCRIMINATION - SUB TEST				
SPANISH/ENGLISH	51.81			
		3.67	1.68	NS
ENGLISH	48.14			
READING - SUB TEST				
SPANISH/ENGLISH	44.81			
		.90	.38	NS
ENGLISH	45.71			
ARITHMETIC - SUB TEST				
SPANISH/ENGLISH	52.19			
		1.85	.82	NS
ENGLISH	50.34			

Objective III

To increase the measurable mental abilities of children who have Spanish cultural/linguistic backgrounds.

The California Test of Mental Maturity was administered to the first grade sample only. An analysis of covariance was performed to determine whether the treatment (K-3 Program) had produced any significant results in terms of measurable mental abilities. The analysis revealed that there were no significant differences in gains between the following groups:

a) Total 1st grade K-3 group and 1st grade Control group

b) 1st grade K-3 English group and 1st grade Control group

c) 1st grade Spanish/English group and 1st grade Control group

d) 1st grade Spanish/English group and 1st grade English group

Sideline analyses revealed that girls made greater gains than boys in numerical reasoning between the pre test and the post test. Further, it revealed that girls who had a preschool experience made greater gains than boys who had a preschool experience, either K-3 Kindergarten or Headstart.

Table XXXVII presents the significant findings that came out of the Analysis of Covariance using data from the California Test of Mental Maturity. Tables XXXVIII - XXXIX present the t-test data for covariance analyses.

TABLE XXXVII

FIRST GRADE 1968-69
CALIFORNIA TEST OF MENTAL MATURITY

ANALYSIS OF COVARIANCE AVAILABLE FOR THE VARIOUS COMPARISONS
SIGNIFICANT F RATIOS INDICATED

GROUP COMPARISON	M.A. LANG.	M.A. NON. LANG	M.A. TOTAL	I.Q. LANG	I.Q. NON LANG	I.Q. TOTAL	SPATIAL RELATIONS	LOGICAL REASONING	NUMERICAL REASONING	VERBAL CONCEPTS	LANG.	NON-LANG	TOTAL
K-3 VS CONTROL									S.05 (F)				
K. VS NO PRESCHOOL									SxE.05 (F.K+HS)				
K. VS. HEAD START									S.05 (F.HS)				
K-3 ENGLISH VS CONTROL													
K. ENGLISH VS. NO PRESCHOOL									SxE.05 (F K)				
K-3 ENGLISH VS. HEAD START													
K-3 SPANISH/ENGLISH VS CONTROL													
K. SPANISH/ENGLISH VS. NO PRESCHOOL													
K. SPANISH/ENGLISH VS. HEAD START													
K-3 ENGLISH VS. K-3 SPANISH/ENGLISH													

S = ... M ... XP ... X ... RAM E = ... SCHO... XPER... E XS ... SCH ... XPE ... CE)

TABLE XXXVIII

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 PROGRAM WITH FIRST GRADE CONTROL PROGRAM

CALIFORNIA TEST OF MENTAL ABILITIES (ADM. FALL, 1969 AND SPRING, 1970)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF .05	.01	P
NUMERICAL REASONING - SUB TEST					
SEX:					
MALE	2.12				
		1.44	.71	.94	.01
FEMALE	3.56				

TABLE XXXIX

t TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 PROGRAM WITH FIRST GRADE CONTROL STUDENTS HAVING HEAD START EXPERIENCE

CALIFORNIA TEST OF MENTAL MATURITY (ADM. FALL, 1969 AND SPRING, 1970)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	t TEST CRITICAL DIFF .05	.01	P
NUMERICAL REASONING - SUB TEST					
SEX:					
MALE	2.18				
		1.84	.71	.94	.01
FEMALE	4.02				

Mean Differences for Metropolitan Achievement Tests

The analysis of covariance done for the purpose of comparing gains between the K-3 Spanish/English and the K-3 English groups was done for the period Fall, 1968 - Spring, 1969. No analysis of variance was done for the period Fall, 1968 - Fall, 1969 because it was felt that not much could be gained in terms of the extra 20 days between testing periods. Instead, it was decided to do a comparison of actual achievement for this period. These are found, by grade, in Tables XXXV and XXXVI.

In terms of actual achievement, at the end of the second year of the K-3 Program, the K-3 English group had achieved significantly more in the areas of Word Discrimination, Word Knowledge, Reading and Arithmetic. An analysis of achievement, using significant differences between means, revealed that there were no statistically significant differences in actual achievement between the K-3 Spanish/English group and the K-3 English group.

Objectives IV and V

To help children of Spanish cultural/linguistic background to develop feelings of self worth.

Feelings of self worth were measured by the Pupil Behavior Rating Scale (Appendix C). These were administered by the teachers. A significant difference between means analysis was performed to compare the various groups in terms of the measure. The results are presented in Table XL.

TABLE XL

PUPIL ADJUSTMENT RATING SCALE

COMPARISON OF SIGNIFICANT DIFFERENCES BETWEEN MEANS

SAMPLE GROUP	MEAN	MEAN DIFF.	CRITICAL RATIO	P
TOTAL K-3 VS. CONTROL				
TOTAL K-3	29.17			
		1.15	1.15	NS
TOTAL CONTROL	28.02			
K-3 ENGLISH VS. CONTROL				
FIRST GRADE:				
K-3 ENGLISH	31.06			
		1.58	2.68	.01
CONTROL	29.48			
SECOND GRADE:				
K-3 ENGLISH	27.51			
		2.22	2.40	.01
CONTROL	29.73			
K-3 SPANISH/ENGLISH VS CONTROL				
FIRST GRADE:				
K-3 SPANISH/ENGLISH	26.60			
		2.88	2.30	.05
CONTROL	29.48			
SECOND GRADE:				
K-3 SPANISH/ENGLISH	24.77			
		4.96	3.84	.01
CONTROL	29.73			
SECOND GRADE:				
K-3 ENGLISH	27.51			
		2.22	2.40	.01
CONTROL	29.73			
K-3 SPANISH/ENGLISH VS. CONTROL				
TOTAL SPANISH/ENGLISH				
TOTAL CONTROL				
FIRST GRADE:				
K-3 SPANISH/ENGLISH	26.60			
		2.88	2.30	.05
CONTROL	29.48			

TABLE XL (CONTINUED)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	CRITICAL RATIO	P
K-3 SPANISH/ENGLISH VS. CONTROL (CONTINUED)				
SECOND GRADE:				
SPANISH/ENGLISH	24.77	4.96	3.84	.01
CONTROL				
K-3 SPANISH/ENGLISH VS. K-3 ENGLISH				
TOTAL K-3 ENGLISH				
TOTAL K-3 SPANISH/ENGLISH				
FIRST GRADE:				
K-3 ENGLISH	31.06	4.46	3.69	.01
K-3 SPANISH/ENGLISH	26.60			
SECOND GRADE:				
K-3 ENGLISH	27.51	2.74	2.17	.05
K-3 SPANISH/ENGLISH	24.77			
SPANISH/ENGLISH VS. ENGLISH				
FIRST GRADE:				
ENGLISH	31.06	4.46	3.69	.01
SPANISH/ENGLISH	26.60			
ENGLISH	27.51	2.74	2.17	.05
SPANISH/ENGLISH	24.77			

Objective VI

To improve home-school relationships so that parents may become more directly involved in the establishment of educational goals for themselves and their children.

The home-school relationship was analyzed in terms of two distinct aspects; first, the parents attitude toward education (PATES) and, second, the parents contact with the school. These are presented in the tables listed below in terms of an analysis of significant differences between means on the Parents Attitude Toward Education Scale (Tables XLI-XLVII) and, as descriptive data, the following:

a) Older siblings: Table XLVIII

b) Younger siblings: Table XLIX

c) Income of Respondents: Table L

d) Age of Respondents: Table LI

e) Educational Level of Respondents: Table LII

f) Sex of Respondents: Table LIII

g) Occupational Level of Male Respondents: Table LIV

h) Occupational Level of Female Respondents: Table LV

The significant differences between means comparison on the PATES revealed the following significant differences:

1) Second Grade K-3 English vs. Control
   Subject: Sustained School Year
   Analysis: Parents of K-3 English gave more support to the sustained school year than parents of Control

2) Second Grade K-3 Spanish/English vs. Control
   Subject: Sustained School Year
   Analysis: Parents of K-3 Spanish/English gave more support to the sustained school year than parents of Control

3) First Grade K-3 Spanish/English vs. K-3 English
   Subject: General Attitude Toward Education
   Analysis: Parents of the First Grade K-3 Spanish/English group gave

greater support to education in general and to the instructional program than parents of the First Grade K-3 English group.

4) Second Grade K-3 Spanish/English vs. K-3 English
   Subject: General Attitude Toward Education
   Analysis: Parents of the Second Grade K-3 Spanish/English group gave greater support to education in general than the parents of K-3 English group.

TABLE XLI

PARENT ATTITUDE TOWARD EDUCATION SCALE
(MAILED TO PARENTS FEBRUARY, 1970)

COMPARISON OF SIGNIFICANT DIFFERENCES BETWEEN MEANS

FIRST GRADE K-3 ENGLISH VS CONTROL ANALYSIS

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	CRITICAL RATIO	P
GENERAL ATTITUDE TOWARD EDUCATION (TOTAL PATES SCORE)				
K-3 ENGLISH	4.03			
		.14	1.51	
CONTROL	3.89			
ATTITUDE TOWARD INSTRUCTIONAL PROGRAM				
K-3 ENGLISH	3.92			
		.09	.71	
CONTROL	3.83			
ATTITUDE TOWARD PARENT-SCHOOL RELATIONS				
K-3 ENGLISH	3.78			
		.01	.08	
CONTROL	3.77			
ATTITUDE TOWARD VALUE OF EDUCATION				
K-3 ENGLISH	4.18			
		.08	.56	
CONTROL	4.10			
ATTITUDE TOWARD OWN EDUCATIONAL EXPERIENCE				
K-3 ENGLISH	3.88			
		.08	.54	
CONTROL	3.96			
ATTITUDE TOWARD SPANISH IN THE CURRICULUM				
K-3 ENGLISH	3.62			
		.03	.19	
CONTROL	3.59			
ATTITUDE TOWARD SUSTAINED SCHOOL YEAR				
K-3 ENGLISH	3.46			
		.28	1.10	
CONTROL	3.18			

TABLE XLII

PARENT ATTITUDE TOWARD EDUCATION SCALE
(MAILED TO PARENTS FEBRUARY, 1970)

COMPARISON OF SIGNIFICANT DIFFERENCES BETWEEN MEANS

SECOND GRADE K-3 ENGLISH VS CONTROL ANALYSIS

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	CRITICAL RATIO	P
GENERAL ATTITUDE TOWARD EDUCATION (TOTAL PATES SCORE)				
K-3 ENGLISH	3.90			
		.09	1.12	
CONTROL	3.99			
ATTITUDE TOWARD INSTRUCTIONAL PROGRAM				
K-3 ENGLISH	3.75			
		.02	.14	
CONTROL	3.77			
ATTITUDE TOWARD PARENT-SCHOOL RELATIONS				
K-3 ENGLISH	3.75			
		.07	.62	
CONTROL	3.82			
ATTITUDE TOWARD VALUE OF EDUCATION				
K-3 ENGLISH	4.12			
		.12	.80	
CONTROL	4.24			
ATTITUDE TOWARD OWN EDUCATIONAL EXPERIENCE				
K-3 ENGLISH	3.94			
		.03	.20	
CONTROL	3.97			
ATTITUDE TOWARD SPANISH IN THE CURRICULUM				
K-3 ENGLISH	3.36			
		.17	.85	
CONTROL	3.53			
ATTITUDE TOWARD SUSTAINED SCHOOL YEAR				
K-3 ENGLISH	3.68			
		.59	2.01	.05
CONTROL	3.09			

TABLE XLIII

PARENT ATTITUDE TOWARD EDUCATION SCALE
(MAILED TO PARENTS FEBRUARY, 1970)

COMPARISON OF SIGNIFICANT DIFFERENCES BETWEEN MEANS

FIRST GRADE K-3 SPANISH/ENGLISH VS CONTROL

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF	CRITICAL RATIO	P
GENERAL ATTITUDE TOWARD EDUCATION (TOTAL PATES SCORE)				
K-3 ENGLISH/SPANISH	3.81			
		.08	1.10	
CONTROL	3.89			
ATTITUDE TOWARD INSTRUCTIONAL PROGRAM				
K-3 ENGLISH/SPANISH	3.59			
		.24	1.82	
CONTROL	3.83			
ATTITUDE TOWARD PARENT-SCHOOL RELATIONS				
K-3 ENGLISH/SPANISH	3.76			
		.05	.46	
CONTROL	3.71			
ATTITUDE TOWARD VALUE OF EDUCATION				
K-3 ENGLISH/SPANISH	3.96			
		.14	1.09	
CONTROL	4.10			
ATTITUDE TOWARD OWN EDUCATIONAL EXPERIENCE				
K-3 ENGLISH/SPANISH	3.81			
		.15	1.24	
CONTROL	3.96			
ATTITUDE TOWARD SPANISH IN THE CURRICULUM				
K-3 ENGLISH/SPANISH	3.56			
		.03	.20	
CONTROL	3.59			
ATTITUDE TOWARD SUSTAINED SCHOOL YEAR				
K-3 ENGLISH/SPANISH	3.50			
		.32	1.54	
CONTROL	3.18			

TABLE XLIV

PARENT ATTITUDE TOWARD EDUCATION SCALE
(MAILED TO PARENTS FEBRUARY, 1970)

COMPARISON OF SIGNIFICANT DIFFERENCES BETWEEN MEANS

SECOND GRADE K-3 SPANISH/ENGLISH VS CONTROL

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF	CRITICAL RATIO	P
GENERAL ATTITUDE TOWARD EDUCATION (TOTAL PATES SCORE)				
K-3 SPANISH/ENGLISH	4.10			
		.11	1.25	
CONTROL	3.99			
ATTITUDE TOWARD INSTRUCTIONAL PROGRAM				
K-3 SPANISH/ENGLISH	3.90			
		.13	.92	
CONTROL	3.77			
ATTITUDE TOWARD PARENT-SCHOOL RELATIONS				
K-3 SPANISH/ENGLISH	3.84			
		.02	.20	
CONTROL	3.82			
ATTITUDE TOWARD VALUE OF EDUCATION				
K-3 SPANISH/ENGLISH	4.24			
		.00	.00	
CONTROL	4.24			
ATTITUDE TOWARD OWN EDUCATIONAL EXPERIENCE				
K-3 SPANISH/ENGLISH	3.93			
		.04	.26	
CONTROL	3.97			
ATTITUDE TOWARD SPANISH IN CURRICULUM				
K-3 SPANISH/ENGLISH	3.54			
		.01	.06	
CONTROL	3.53			
ATTITUDE TOWARD SUSTAINED SCHOOL YEAR				
K-3 SPANISH/ENGLISH	3.73			
		.64	2.35	.05
CONTROL	3.09			

TABLE XLV

PARENT ATTITUDE TOWARD EDUCATION SCALE
(MAILED TO PARENTS FEBRUARY, 1970)

COMPARISON OF SIGNIFICANT DIFFERENCES BETWEEN MEANS

FIRST GRADE K-3 SPANISH/ENGLISH VS K-3 ENGLISH

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF	CRITICAL RATIO	P
GENERAL ATTITUDE TOWARD EDUCATION (TOTAL PATES SCORE)				
K-3 ENGLISH	4.03			
		.22	2.52	.05
K-3 SPANISH/ENGLISH	3.86			
ATTITUDE TOWARD INSTRUCTIONAL PROGRAM				
K-3 ENGLISH	3.92			
		.33	2.50	.05
K-3 SPANISH/ENGLISH	3.59			
ATTITUDE TOWARD PARENT-SCHOOL RELATIONS				
K-3 ENGLISH	3.78			
		.02	.17	
K-3 SPANISH/ENGLISH	3.76			
ATTITUDE TOWARD VALUE OF EDUCATION				
K-3 ENGLISH	4.18			
		.22	1.69	
K-3 SPANISH/ENGLISH	3.96			
ATTITUDE TOWARD OWN EDUCATIONAL EXPERIENCE				
K-3 ENGLISH	3.88			
		.07	.48	
K-3 SPANISH/ENGLISH	3.81			
ATTITUDE TOWARD SPANISH IN THE CURRICULUM				
K-3 ENGLISH	3.62			
		.06	.36	
K-3 SPANISH/ENGLISH	3.56			
ATTITUDE TOWARD SUSTAINED SCHOOL YEAR				
K-3 ENGLISH	3.46			
		.04	.16	
K-3 SPANISH/ENGLISH	3.50			

TABLE XLVI

PARENT ATTITUDE TOWARD EDUCATION SCALE
(MAILED TO PARENTS FEBRUARY, 1970)

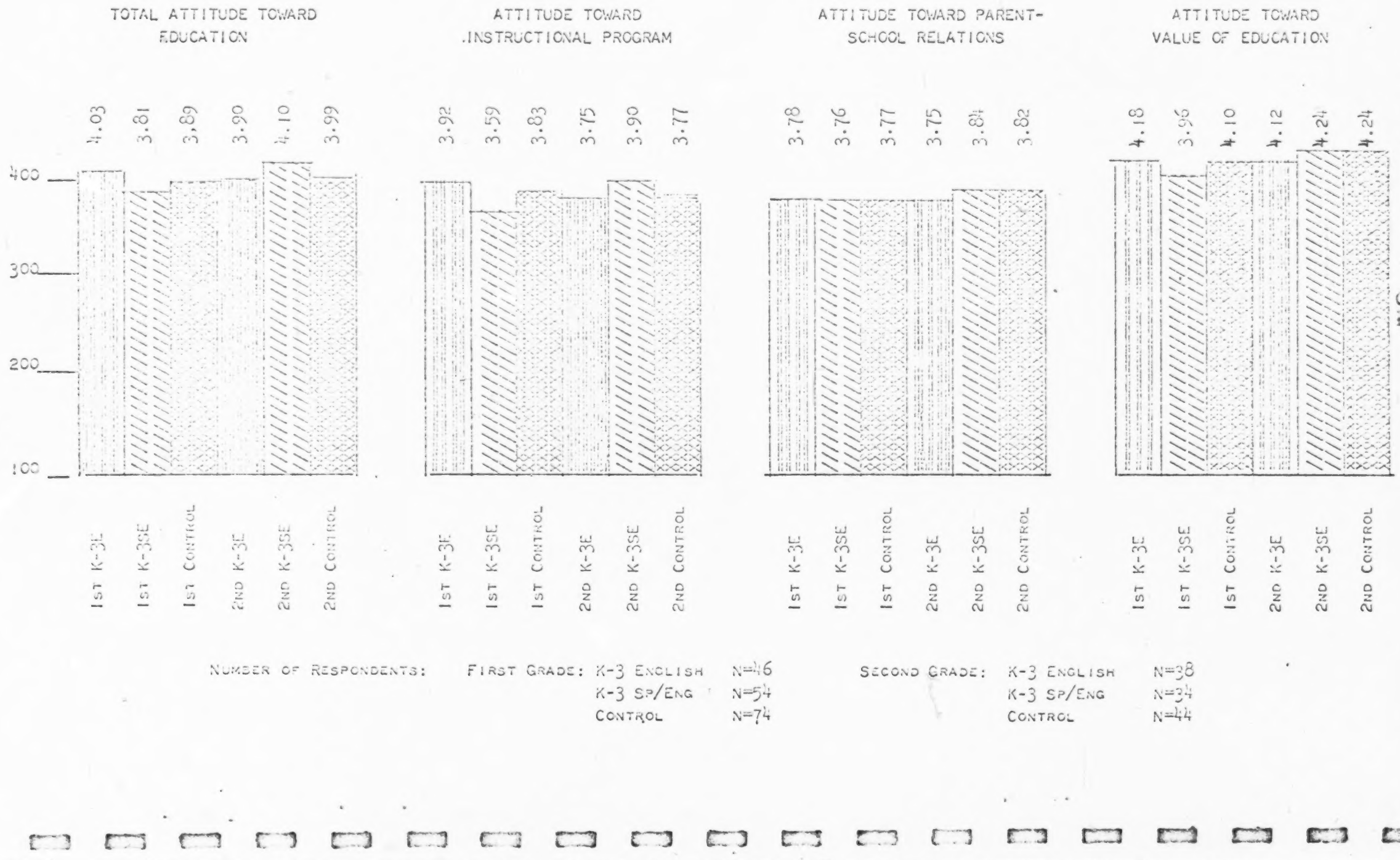
COMPARISON OF SIGNIFICANT DIFFERENCES BETWEEN MEANS

SECOND GRADE SPANISH/ENGLISH VS ENGLISH

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF	CRITICAL RATIO	P
GENERAL ATTITUDE TOWARD EDUCATION (TOTAL PATES SCORE)				
K-3 ENGLISH	3.90			
		.20	2.04	.05
K-3 SPANISH/ENGLISH	4.10			
ATTITUDE TOWARD INSTRUCTIONAL PROGRAM				
K-3 ENGLISH	3.75			
		.15	.98	
K-3 SPANISH/ENGLISH	3.90			
ATTITUDE TOWARD PARENT-SCHOOL RELATIONS				
K-3 ENGLISH	3.75			
		.09	.66	
K-3 SPANISH/ENGLISH	3.84			
ATTITUDE TOWARD VALUE OF EDUCATION				
K-3 ENGLISH	4.12			
		.12	.90	
K-3 SPANISH/ENGLISH	4.24			
ATTITUDE TOWARD OWN EDUCATIONAL EXPERIENCE				
K-3 ENGLISH	3.94			
		.01	.06	
K-3 SPANISH/ENGLISH	3.93			
ATTITUDE TOWARD SPANISH IN THE CURRICULUM				
K-3 ENGLISH	3.36			
		18	.94	
K-3 SPANISH/ENGLISH	3.54			
ATTITUDE TOWARD SUSTAINED SCHOOL YEAR				
K-3 ENGLISH	3.68			
		.05	.18	
K-3 SPANISH/ENGLISH	3.73			

TABLE XLVII

PATES: PARENT ATTITUDE TOWARD EDUCATION SCALE
(ADMINISTERED: FEBRUARY, 1969)

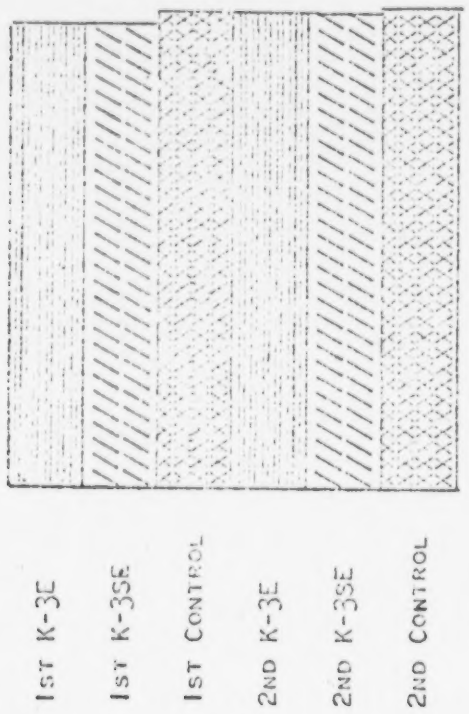


NUMBER OF RESPONDENTS:

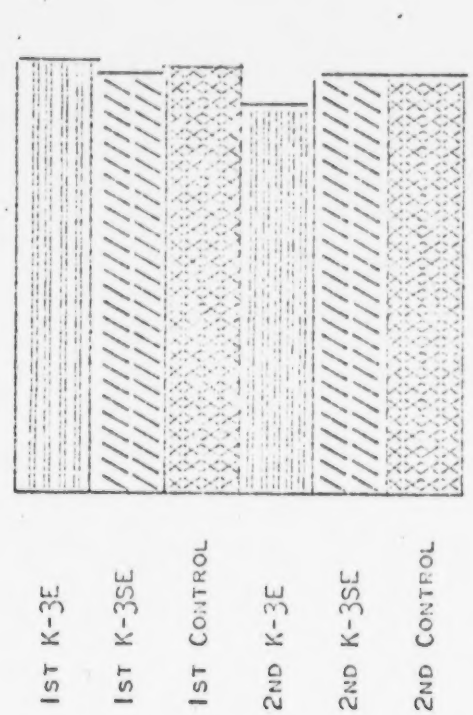
FIRST GRADE:	K-3 ENGLISH	N=46	SECOND GRADE:	K-3 ENGLISH N=38
	K-3 SP/ENG	N=54		K-3 SP/ENG N=34
	CONTROL	N=74		CONTROL N=44

TABLE XLVII (CONTINUED) PAGE 2 PATES: PARENT ATTITUDE TOWARD EDUCATION SCALE

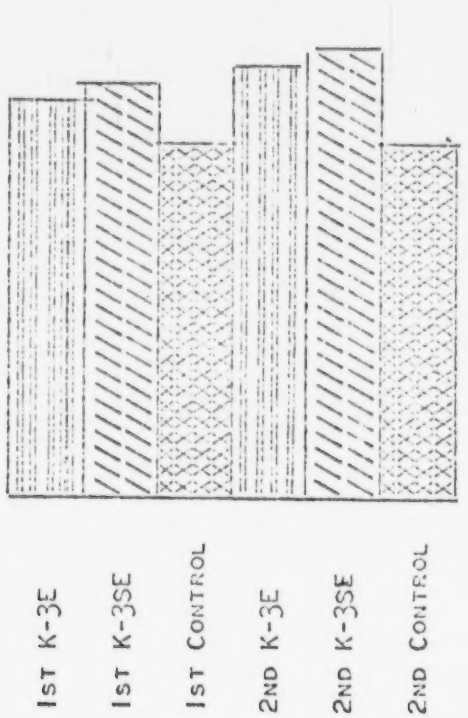
ATTITUDE TOWARD OWN EDUCATIONAL EXPERIENCE



ATTITUDE TOWARD SPANISH IN EDUCATION



ATTITUDE TOWARD SUSTAINED SCHOOL YEAR



DESCRIPTIVE DATA OF PARENTS OF CHILDREN IN STUDY

TABLE XLVIII

CHILDREN OF PATES RESPONDENTS HAVING OLDER SIBLINGS

SAMPLE GROUP	NUMBER OF CHILDREN IN FAMILY OLDER THAN CHILD IN PROGRAM												
	0	1	2	3	4	5	6	7	8	9	10	11	12
1ST GR. EXP. SPAN/ENG	6	6	3	6	1	3	1	0	1				
1ST GR. EXP. ENG	1	3	8	4	4	1	0	2					
1ST GR. CONTROL	4	5	9	9	2	1	3	2					
2ND GR. EXP. SPAN/ENG	6	3	2	1	3	2	0	1					
2ND GR. EXP. ENG	4	2	1	3	3	2	1	1					
2ND GR. CONTROL	3	4	2	4	5	2	1	1					
TOTAL EXP.	17	14	14	11	8	2	4						
TOTAL CONTROL	7	9	11	13	7	3	4	3					

TABLE XLVIX

CHILDREN OF PATES RESPONDENTS HAVING YOUNGER SIBLINGS

SAMPLE GROUP	NUMBER OF CHILDREN IN FAMILY YOUNGER THAN CHILD IN PROGRAM												
	0	1	2	3	4	5	6	7	8	9	10	11	12
1ST GR. EXP. SPAN/ENG	11	11	3	2	0								
1ST GR. EXP. ENG	7	9	4	3	1								
1ST GR. CONTROL	10	14	7	3	1								
2ND GR. EXP. SPAN/ENG	3	6	5	2	1	1							
2ND GR. EXP. ENG	2	4	5	3	3								
2ND GR. CONTROL	8	8	4	2	0								
TOTAL EXP.	23	30	17	9	5	1							
TOTAL CONTROL	18	22	11	5	1	0							

TABLE L

INCOME OF FAMILY RESPONDING TO PATES

SAMPLE GROUP	BELOW $3,000	3,000 5,000	5,000 7,000	7,000 9,000	9,000 11,000	11,000 & OVER	OMITTED
1ST GR. EXP. SP/ENG	4	13	4	1	2	0	3
1ST GR. EXP. ENG	6	7	5	2	0	0	4
1ST GR. CONTROL	9	8	9	5	1	1	2
2ND GR. EXP. SP/ENG	7	4	3	1	0	1	2
2ND GR. EXP. ENG	4	4	5	1	0	0	3
2ND GR. CONTROL	4	10	6	1	1	0	0
TOTAL EXPERIMENTAL	21	28	17	5	2	1	12
TOTAL CONTROL	13	18	15	6	2	1	2

TABLE L1

AGE OF PARENT RESPONDING TO PATES

SAMPLE GROUP	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60
1ST GR. EXP. SP/ENG	0	3	7	14	3	1	1	0
1ST GR. EXP. ENG	2	4	11	3	4	1	0	0
1ST GR. CONTROL	1	8	10	9	6	1	0	1
2ND GR. EXP. SP/ENG	0	5	5	6	0	2	0	0
2ND GR. EXP. ENG	0	2	10	3	2	0	0	0
2ND GR. CONTROL	0	1	8	4	8	1	0	0
TOTAL EXPERIMENTAL	2	14	33	26	9	4	1	0
TOTAL CONTROL	1	9	18	13	14	2	0	1

TABLE LII

EDUCATIONAL LEVEL OF PATES RESPONDENT

		1ST GR. EXP SPAN/ENG.	1ST GR. EXP.ENG.	1ST GR. CONTROL	2ND GR. EXP SPAN/ENG.	2ND GR. EXP.ENG.	2ND GR. CONTROL	TOT. EXP.	TOT. CONT.
OMITTED	M	1	0	2	0	1	0	2	2
	F	1	0	1	0	1	0	2	1
6TH GR. OR BELOW	M	8	4	3	3	4	3	19	6
	F	3	1	4	3	1	3	8	7
7TH	M	0	0	0	0	0	0	0	0
	F	2	1	1	1	2	2	6	3
8TH	M	1	1	4	0	0	2	2	6
	F	4	3	1	3	0	1	10	2
9TH	M	1	5	1	2	3	0	11	1
	F	1	2	1	0	1	1	4	2
10TH	M	0	3	2	0	0	0	3	2
	F	1	0	0	0	0	0	1	0
11TH	M	1	0	1	0	0	1	1	2
	F	1	5	0	3	1	0	10	0
12TH	M	1	0	6	2	0	2	3	8
	F	1	0	6	0	3	7	4	13
COLLEGE									
1 YR	M	0	0	0	0	0	0	0	0
	F	0	0	0	0	0	0	0	0
2 YR	M	0	0	0	0	0	0	0	0
	F	0	0	2	0	0	0	0	2
3 YR	M	0	0	0	0	0	0	0	0
	F	0	0	0	0	0	0	0	0
4 YR	M	0	0	0	1	0	0	1	0
	F	0	0	0	0	0	0	0	0
POST. GRAD.	M	0	0	0	0	0	0	0	0
	F	0	0	1	0	0	0	0	1

TABLE LIII

SEX OF PARENT RESPONDING TO PATES

	MALE	FEMALE	TOTAL
1ST GR. EXP. SPAN/ENG	13	16	29
1ST GR. EXP. ENGLISH	10	15	25
1ST GR. CONTROL	20	16	36
2ND GR. EXP. SPAN/ENG	8	10	18
2ND GR. EXP. ENGLISH	7	10	17
2ND GR. CONTROL	8	14	22
TOTAL EXPERIMENTAL	38	51	89
TOTAL CONTROL	28	30	58

TABLE LIV

OCCUPATIONAL LEVELS OF MALE PATES RESPONDENTS*

SAMPLE GROUP	OMITTED	NOT EMPLOYED	001 099	100 199	200 299	300 399	400 499	500 599	600 699	700 799	800 899	900 999
1ST GR. EXP. SP/ENG	0	0	0	0	4	2	8	0	0	0	8	3
1ST GR. EXP. ENGLISH	2	3	0	0	5	2	0	1	3	0	1	4
1ST GR. CONTROL	2	3	0	2	8	2	3	2	5	2	2	2
2ND GR. EXP. SP/ENG.	0	1	1	0	2	1	3	0	2	0	3	2
2ND GR. EXP. ENGLISH	0	2	0	0	4	1	1	0	0	0	2	2
2ND GR. CONTROL	0	0	1	0	3	1	4	2	2	0	2	2
TOTAL EXP.	2	6	1	0	15	6	12	1	5	0	14	11
TOTAL CONTROL	2	3	1	2	12	3	7	4	7	2	4	4

TABLE LV

OCCUPATIONAL LEVELS OF FEMALE PATES RESPONDENTS*

SAMPLE GROUP	OMITTED	NOT EMPLOYED	001 099	100 199	200 299	300 399	400 499	500 599	600 699	700 799	800 899	900 999
1ST GR. EXP. SP/ENG.	0	22	0	0	1	3	3	0	0	0	0	0
1ST GR. EXP. ENGLISH	1	18	0	0	2	1	0	0	0	1	0	0
1ST GR. CONTROL	0	27	1	0	3	2	3	0	0	0	0	1
2ND GR. EXP. SP/ENG.	0	10	0	0	0	0	0	0	0	0	0	0
2ND GR. EXP. ENGLISH	0	8	0	0	0	1	0	0	0	0	0	0
2ND GR. CONTROL	0	14	0	0	1	0	0	0	0	1	0	0
TOTAL EXP.	2	58	0	0	3	5	3	0	0	1	0	0
TOTAL CONTROL	0	41	1	0	4	3	2	0	0	1	0	1

Parental-School Contacts (Table LVI)

I. Conferences

A. First Grade Experimental - Control Comparison

The Control group had 14% more parents who did not have any conferences. About the same number of parents from each group had one or two conferences. The Control group had 5% more parents who had three or more conferences. The Experimental group had 14% more parental conferences even when data from one school was unavailable on first grade contacts.

B. First Grade Spanish/English - English Comparison

The Experimental English group had 20% more parents that did not come for a conference. About the same number of parents from each group came for one or two conferences. However 24% more Spanish/English parents came for three or more conferences. This analysis was made with data from one school unavailable.

C. Second Grade Experimental - Control Comparison

The Control group had 20% more parents that had no conferences. The Experimental group had 10% more parents that came in for one or two conferences and 9% more parents that came in for three or more conferences. The Experimental group had a total of 20% more parents that came for conferences.

D. Second Grade Spanish/English - English Comparison

The Spanish/English group had 10% more parents that had no conferences. The English group had 36% more parents that came for one or two conferences. However, the Spanish/English group had 26% more parents that came for three or more conferences.

II. Phone Conferences

A. First Grade Experimental - Control Comparison

This comparison is made with data unavailable from one school who had an Experimental English program. The Control group had 8% more parents who had no phone conferences. The Experimental group had 7% more parents who had one or two phone conferences and 1% more who had three or more phone conferences. The Experimental group had 8% more parents who had phone conferences.

B. First Grade Spanish/English - English Comparison

With data from one school which had an Experimental Spanish/English program unavailable, the Spanish/English group had 8% more parents who had no phone conferences. Both groups had the same number of parents who had one or two phone conferences. However, the Experimental English group had 6-1/2% more parents who had three or more phone conferences.

C. Second Grade Experimental - Control Group Comparison

The Second Grade Control group had 20% more parents who had no telephone conferences. The Control group had 14% less parents in the 'one or two' conferences classification and 4% less parents in the 'three or more' category.

D. Second Grade Spanish/English - English Comparison

The Experimental English group had 11% more parents who had no phone conferences and 10% less who had three or more conferences.

III. P.T.A. Attendance

A. First Grade Experimental - Control Comparison

With data from one Experimental (Spanish/English) school unavailable, the comparison shows that the parents of the Control group had 40% more parents who did not attend PTA. They also had 17% less in the 'one or two' attendance category and 43% less in the 'three or more' attendance category.

B. First Grade Spanish/English - English Comparison

This analysis is made without data from one of the Spanish/English schools. The 'no attendance' category reflects similar absences. However, the parents of the Spanish/English group had 22% more in the 'one or two' attendance category and 20% less in the 'three or more' attendance category.

C. Second Grade Experimental - Control Comparison

As reflected by Table LVI, the Control group had 24% more parents who did not attend any of the meetings. The Control group also had 3% more in the 'one or two' category and 21% more in the 'three or more' attendance category.

D. Second Grade Spanish/English - English Comparison

Parents of the Spanish/English group had 6% more who did not attend any meetings. However, they had 2% more in the 'one or two' attendance category and 4% more in the 'three or more' attendance category.

IV. Classroom Visits

A. First Grade Experimental - Control Comparison

Again, this analysis is made without data from one of the Experimental schools. Still, Table LVI reveals that the Control group had 22% more parents who made no classroom visits. The Experimental group had 23% more parents in the 'one or two' category. In the 'three or more' category they were similar in attendance.

B. First Grade Spanish/English - English Comparison

This analysis is made without data from one of the schools which had a Spanish/English program. The English group had 11% more parents who made no classroom visits and 10% less in the 'one or two' attendance category. The three or more attendance category was similar.

C. Second Grade Experimental - Control Comparison

The Control group had 46% more parents who made no classroom visits. The Experimental group had 27% more in the 'one or two'category and 18% more parents in the 'three or more' category.

D. Second Grade Spanish/English - English Comparison

The English group had 18% more parents who had no classroom visits. The Spanish/English group had 4% more parents in the 'one or two' category and 14% more in the 'three or more' visits category.

V. Home Visits

A. First Grade Experimental - Control Comparison

With data from one Experimental school unavailable, Table LVI reveals that the Control group had 8% more parents who received no home visits. The Experimental group had 10% more parents in the 'one or two' category and 2% less parents in the 'three or more' category.

B. First Grade Spanish/English - English Comparison

Data from one school that has a Spanish/English program was unavailable. This analysis reflects that limitation. The parents of the English group had 33% more parents who did not receive a home visit. The Spanish/English group had 38% more in the 'one or two'visit category. Finally, the English group had 2% more parents in the 'three or more' visits category.

C. Second Grade Experimental - Control Comparison

The Control group had 21% more parents who received no home visits. The Experimental group had 15% more parents in the 'one or two' visits category and 6% more parents in the 'three or more' visits category.

D. Second Grade Spanish/English - English Comparison

The English group had 17% more parents who received no home visits. However, the English group had 4% more parents in the 'one or two' visits category. The Spanish/English group had 13% more parents who received three or more home visits.

In summary, it appears that the Experimental group had more contact with the school in all the areas than the Control group. Furthermore, the analysis revealed that parents whose children are in the Spanish/English program had more contact than the parents who had children in the English group.

Table LVI presents a summary of the various sample groups.

TABLE LVI

AMOUNT OF PARENT-SCHOOL CONTACT OF THE VARIOUS SAMPLE GROUPS

SAMPLE GROUP	FREQUENCY OF PARTICIPATION: ZERO N (%)	1 OR 2 N (%)	3 OR MORE N (%)	% HAVING CONFERENCES
CONFERENCES				
FIRST GRADE:				
EXPERIMENTAL ENGLISH	17 (38)	28 (62)	0 (0)	62
EXPERIMENTAL SPANISH/ENGLISH*	3 (18)	10 (59)	4 (24)	83
EXPERIMENTAL TOTAL*	20 (32)	38 (61)	4 (7)	68
CONTROL	43 (46)	40 (42)	11 (12)	54
SECOND GRADE:				
EXPERIMENTAL ENGLISH	12 (35)	21 (62)	1 (3)	65
EXPERIMENTAL SPANISH/ENGLISH	14 (45)	8 (26)	9 (29)	45
EXPERIMENTAL TOTAL	26 (40)	29 (45)	10 (15)	60
CONTROL	38 (59½)	22 (34½)	4 (6)	40
PHONE CONFERENCES				
FIRST GRADE:				
EXPERIMENTAL ENGLISH	34 (75½)	8 (18)	3 (6½)	25
EXPERIMENTAL SPANISH/ENGLISH*	14 (82)	3 (18)	0 (0)	18
EXPERIMENTAL TOTAL*	48 (77)	11 (18)	3 (5)	23
CONTROL	80 (85)	10 (11)	4 (4)	15
SECOND GRADE:				
EXPERIMENTAL ENGLISH	27 (79)	6 (18)	1 (3)	21
EXPERIMENTAL SPANISH/ENGLISH	21 (68)	6 (19)	4 (13)	32
EXPERIMENTAL TOTAL	48 (74)	12 (18½)	5 (7½)	26
CONTROL	60 (94)	3 (4½)	1 (1½)	6

* DATA FROM ONE SCHOOL UNAVAILABLE

TABLE LVI (CONTINUED) PAGE 2

SAMPLE GROUP	FREQUENCY OF PARTICIPATION: ZERO N (%)	1 OR 2 N (%)	3 OR MORE N (%)	% HAVING CONFERENCES
P.T.A.				
FIRST GRADE:				
EXPERIMENTAL ENGLISH	9 (20)	14 (31)	22 (49)	60
EXPERIMENTAL SPANISH/ENGLISH*	3 (18)	9 (53)	5 (29)	82
EXPERIMENTAL TOTAL*	12 (19)	23 (37)	27 (44)	81
CONTROL	55 (59)	19 (20)	20 (21)	41
SECOND GRADE:				
EXPERIMENTAL ENGLISH	3 (38)	8 (24)	13 (38)	62
EXPERIMENTAL SPANISH/ENGLISH	10 (32)	8 (26)	13 (42)	68
EXPERIMENTAL TOTAL	23 (35)	16 (25)	26 (40)	65
CONTROL	38 (59)	14 (22)	12 (19)	41
CLASSROOM VISITS:				
FIRST GRADE:				
EXPERIMENTAL ENGLISH	18 (40)	22 (49)	5 (11)	60
EXPERIMENTAL SPANISH/ENGLISH*	5 (29)	10 (59)	2 (12)	71
EXPERIMENTAL TOTAL*	23 (37)	32 (52)	7 (11)	63
CONTROL	56 (59)	27 (29)	11 (12)	41
SECOND GRADE:				
EXPERIMENTAL ENGLISH	15 (44)	14 (41)	5 (15)	56
EXPERIMENTAL SPANISH/ENGLISH	8 (26)	14 (45)	9 (29)	74
EXPERIMENTAL TOTAL	23 (35)	28 (43½)	14 (21½)	65
CONTROL	52 (81)	10 (16)	2 (3)	19

* DATA FROM ONE SCHOOL UNAVAILABLE

TABLE LVI (CONTINUED) PAGE 3

SAMPLE GROUP	FREQUENCEY OF PARTICIPATION: ZERO N (%)	1 OR 2 N (%)	3 OR MORE N (%)	% HAVING CONFERENCES
HOME VISITS				
SECOND GRADE:				
EXPERIMENTAL ENGLISH	29 (85)	5 (15)	0 (0)	15
EXPERIMENTAL SPANISH/ENGLISH	21 (68)	6 (19)	4 (13)	32
EXPERIMENTAL TOTAL	50 (77)	11 (17)	4 (6)	23
CONTROL	63 (98)	1 (2)	0 (0)	2

Objective VII

To provide continuous educational learning experiences so that no time is lost in review or reteaching.

This objective was tested by comparing the achievement of pupils in the K-3 program with a school calendar of 200 days and the gains in achievement of the regular classroom (control group) with a school calendar of 180 days. The analysis of covariance used the Fall, 1968 Metropolitan Achievement Test scores as pre-test data and the Fall, 1969 Metropolitan Achievement Test scores as post-test data. A discussion of the findings are presented below. Table LVII presents the data. Tables LVIII-LXV present the t-tests and F ratios used to compute Table LVII.

Metropolitan Achievement Test

A. K-3 - Total Regular Control Comparison

1. Total K-3 - Total Regular Control

a. Program

An analysis of the total K-3 and total regular control population across grades revealed that the pupils in the K-3 program made significantly greater gains than the Control group who had no summer language program in the area of Arithmetic. However, the Control with no summer language program made greater gains in the area of Reading.

b. Sex

An analysis across grade levels, analyzed in terms of the sex variable, revealed that girls made significantly greater gains on the Word Discrimination subtest than boys.

2. K-3 First Grade - Regular Control First Grade Comparison

a. Program

An analysis of first grade performance by the K-3 and Control with no summer language program revealed no significant differences in achievement gains.

b. Sex

An analysis of the gains by the K-3 and Control group with no summer language program, by sex, revealed no significant differances.

c. Sex and Preschool Experience

When analyzed in terms of Sex and Preschool Experience, the girls who had a Headstart program experience made greater gains than boys who had a Headstart program experience. When analyzed in terms of Preschool Experience alone, no significant differances were found for these two groups.

3. Second Grade K-3 - Second Grade Regular Control Comparison

a. No significant differences were found when these two groups were compared on the basis of program, sex, preschool experience or sex by preschool experience. When they were compared on the basis of sex and program, it was found that second grade girls in the Control group who had no summer language program made significantly greater gains in the area measured by the Word Discrimination subtest.

B. K-3 Program - Second Summer Language Program Control Comparison

1. Total K-3 - Total SSLP Control

a. Program

When the total K-3 group was compared with the total SSLP Control group across grades, it was found that the SSLP Control students made significantly greater gains than the K-3 group in Reading.

b. Sex

When an analysis was made on the basis of sex, it was found that as a total group, girls made greater gains than boys in the areas of Word Knowledge, Word Discrimination and Reading.

2. Total Spanish/English K-3 - Total Second Summer Language Program Control Comparison

a. Program

An analysis by program revealed that the SSLP Control group made significantly greater gains than the K-3 Spanish/English group in the areas of Word Knowledge and Reading.

b. Sex

The analysis by sex revealed that the girls, regardless of the program, made greater gains than the boys in the areas of Word Discrimination and Reading.

3. Total K-3 English - Total Second Summer Language Program Control Comparison

a. Program

No significant differences in achievement gains were found when the K-3 English group was compared with the SSLP Control group.

b. Sex

An analysis by sex revealed that girls, regardless of the program, made significantly greater gains than boys in the areas of Word Knowledge, Word Discrimination and Reading.

C. Second Summer Language Program Control - Regular Control

1. Total SSLP Control - Total Regular Control

a. Program

When total groups were compared, there were no significant differances in achievement gains between the SSLP Control and the Regular Control.

b. Sex and Preschool Experience

When the sex factor was used as a basis for comparison, it was found that girls made greater gains than boys in Word Discrimination. No differences were found when analyzed by preschool experience only.

2. First Grade Second Summer Language Program Control - Regular Control Comparison

a. Program

When analyzed by program, it was found that first graders who

had the SSLP experience made significantly greater gains in Arithmetic than first graders who had no SSLP experience.

b. Sex

First grade girls made greater gains than boys in Word Knowledge and Word Discrimination.

3. Second Grade Second Summer Language Program Control - Regular Control Comparison

a. Program and Preschool

When second graders were compared on the basis of these two variables, it was found that there were no significant differences in achievement gains of the SSLP Control and the regular Control groups.

b. Sex

A comparison based on the sex variable indicated that girls made greater gains than boys in Word Discrimination.

TABLE LVII

METROPOLITAN ACHIEVEMENT TEST
(12 MO. COMPARISON)

ADMINISTERED FALL, 1968 AND FALL, 1969)
ANALYSIS OF COVARIANCE AVAILABLE FOR THE VARIOUS GROUP COMPARISONS
SIGNIFICANT F RATIOS INDICATED

GROUP COMPARISON	WORD KNOWLEDGE	WORD DISCRIMINATION	READING	ARITHMETIC
TOTAL K-3 CONTROL NO SSLP		S.01 (F)	P.01 (K-3)	P.01 (K-3)
1ST GR. K-3 1ST GR. CONTROL NO SSLP	SxP (FHS)			
2ND GR. K-3 2ND GR. NO SSLP		SxP.05 (F)		
TOTAL K-3 CONTROL SSLP	S.01 (F)	S.01 (F)	S.01 (F) P.01 (SSLP)	
ENGLISH K-3 CONTROL SSLP	S.05 (F)	S.01 (F)	S.05 (F)	
SPANISH/ENGLISH K-3 CONTROL SSLP	P.01 (SSLP)	S.01 (F)	S.01 (F) P.01 (SSLP)	
CONTROL NO SSLP CONTROL SSLP		S.05 (F)		
1ST GR. NO SSLP 1ST GR. CONTROL SSLP	S.05 (F) E.05 (HS)	S.01 (F)		P.05 (SSLP)
2ND GR. NO SSLP 2ND GR. CONTROL SSLP		S.05 (F)		
1ST GR. KINDERGARTEN 1ST GR. NO SSLP & NO PRESCHOOL	SxE.05 (F)	SxE.05 (F)		
1ST GR. KINDERGARTEN 1ST GR. NO SSLP & PRESCHOOL	S.05 (F)			

S = SEX: M- MALE, F- FEMALE
P = PROGRAM: C- CONTROL; HS- HEAD START; SSLP- SECOND SUMMER LANGUAGE PROGRAM
E = PRESCHOOL EXPERIENCE
SxE = SEX x PRESCHOOL EXPERIENCE
SxP = SEX x PROGRAM

TABLE LVIII

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF TOTAL K-3 PROGRAM WITH TOTAL CONTROL WITH NO SECOND SUMMER LANGUAGE PROGRAM

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND FALL, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD DISCRIMINATION - SUB TEST					
SEX:					
MALE	45.18	3.28	1.88	2.47	.01
FEMALE	48.46				
READING - SUB TEST					
PROGRAM:					
K-3	43.57	3.54	2.38	3.12	.01
CONTROL	47.11				
ARITHMETIC - SUB TEST					
PROGRAM:					
K-3	47.61	2.81	2.12	2.78	.01
CONTROL	44.79				

TABLE LIX

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF TOTAL K-3 PROGRAM WITH TOTAL CONTROL WITH SECOND SUMMER LANGUAGE PROGRAM

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND FALL, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD KNOWLEDGE - SUB TEST					
SEX:					
MALE	44.88				
		2.32	2.00	2.63	.05
FEMALE	47.20				
WORD DISCRIMINATION - SUB TEST					
SEX:					
MALE	45.87				
		4.34	2.04	2.68	.01
FEMALE	50.21				
READING - SUB TEST					
SEX:					
MALE	44.07				
		3.52	2.34	3.07	.01
FEMALE	47.59				
PROGRAM:					
K-3	43.76				
		4.16	2.49	3.28	.01
CONTROL SSLP	47.90				

TABLE LX

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF K-3 ENGLISH PROGRAM WITH CONTROL SECOND SUMMER LANGUAGE PROGRAM

METROPOLITAN ACHIEVEMENT PROGRAM (ADM. FALL, 1968 AND FALL, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD KNOWLEDGE - SUB TEST					
SEX:					
MALE	46.08				
		5.16	2.55	3.36	.01
FEMALE	51.20				
WORD DISCRIMINATION - SUB TEST					
SEX:					
MALE	46.58				
		3.04	2.37	3.12	.05
FEMALE					
READING - SUB TEST					
SEX:					
MALE	45.89				
		3.18	2.49	3.29	.05
FEMALE	49.07				

TABLE LXI

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF K-3 SPANISH/ENGLISH PROGRAM WITH CONTROL SECOND SUMMER LANGUAGE PROGRAM

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND FALL, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD KNOWLEDGE - SUB TEST					
PROGRAM:					
K-3 SPANISH/ENGLISH	43.31	3.56	2.46	3.24	.01
CONTROL SSLP	46.87				
WORD DISCRIMINATION - SUB TEST					
SEX:					
MALE	45.02	3.96	2.61	3.45	.01
FEMALE	48.98				
READING - SUB TEST					
SEX:					
MALE	42.57	3.72	2.73	3.60	.01
FEMALE	46.29				
PROGRAM:					
K-3 SPANISH/ENGLISH	40.95	6.96	3.72	4.91	.01
CONTROL SSLP	47.91				

TABLE LXII

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF CONTROL FIRST AND SECOND GRADE NO SECOND SUMMER LANGUAGE PROGRAM WITH FIRST AND SECOND GRADE SECOND SUMMER LANGUAGE PROGRAM

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND FALL, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD DISCRIMINATION - SUB TEST					
PROGRAM:					
CONTROL 1ST & 2ND GR. SSLP	45.82				
		3.70	2.53	3.34	.01
CONTROL 1ST & 2ND GR. NO SSLP	49.52				

TABLE LXIII

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF CONTROL FIRST GRADE NO SECOND SUMMER LANGUAGE PROGRAM WITH CONTROL FIRST GRADE SECOND SUMMER LANGUAGE PROGRAM

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND FALL, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD KNOWLEDGE - SUB TEST					
SEX:					
MALE	43.76				
		3.04		2.73	.01
FEMALE	46.80				
EXPERIENCE:					
NO PRESCHOOL	43.64				
		3.28		2.73	.01
HEAD START	46.92				
WORD DISCRIMINATION - SUB TEST					
SEX:					
MALE	44.00				
		3.78	2.21	2.92	.01
FEMALE	47.78				
ARITHMETIC - SUB TEST					
PROGRAM:					
CONTROL 1ST GR. NO SSLP	44.31				
		3.52	1.84	2.45	.01
CONTROL 1ST GR. SSLP	47.83				

TABLE LXIV

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF CONTROL SECOND GRADE NO SECOND SUMMER LANGUAGE PROGRAM WITH CONTROL SECOND GRADE SECOND SUMMER LANGUAGE PROGRAM

METROPOLITAN ACHIEVEMENT TEST ADM. FALL, 1968 AND FALL, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD DISCRIMINATION - SUB TEST					
SEX:					
MALE	46.50				
		5.88	3.70	4.92	.01
FEMALE	52.38				

TABLE LXV

T TEST OF ADJUSTED MEANS WITH SIGNIFICANT F RATIOS FOR COMPARISON OF FIRST GRADE K-3 PROGRAM WITH FIRST GRADE 180 DAY CONTROL PROGRAM AND HEAD START

METROPOLITAN ACHIEVEMENT TEST (ADM. FALL, 1968 AND FALL, 1969)

SAMPLE GROUP	ADJUSTED MEAN	MEAN DIFF.	T TEST CRITICAL DIFF. .05	.01	P
WORD KNOWLEDGE - SUB TEST					
SEX:					
MALE	44.02				
		3.38	2.95	3.90	.05
FEMALE					

CHAPTER III

CONCLUSIONS and IMPLICATIONS

While there are few conclusions that can be drawn during the second year of the program other than those already discussed in Chapter II concerning the worth or value of the program, the following trends and observations seem to be evident.

I. Sex Groups

A. It appears, contrary to the first year report, that during the second year of the program, the female subject displayed more language growth than the males. Female subjects displayed greater gains in the Metropolitan Achievement subtests Word Knowledge and Word Discrimination. This was also true for the following subtests of the Metropolitan Readiness Test: Word Meaning, Listening, Matching and Alphabet. It was further evident that they made greater gains in Reading as measured by the Reading subtest of the Metropolitan Achievement Test.

B. The females also exhibited greater gains in the Numerical Reasoning subtest of the California Test of Mental Maturity. However, there was no evidence of significant differences between males and females in other arithmetic measures.

II. Program Groups

A. As a general rule the Control group seems to have made greater gains in the first grade. This was true as measured by the Metropolitan

Readiness Test and the Metropolitan Achievement Test (nine month period). However, for the second grade subjects, there were few significant differences. In some cases the differences were in favor of the K-3 group. This would indicate that the K-3 group "catch up" during the summer session and the first year. This would seem feasible because even at the twelve month comparison the Control group is favored in the gains made.

B. Summer instruction appears to be beneficial for first grade bilingual students. This is evident in two cases; first, the extra twenty days of instruction available through the K-3 program "brought them up" to the point where their gains were significantly greater at the twelve month comparison in the areas of Reading and Arithmetic (MAT) than the Control SSLP, even though they had gained significantly less during the nine month comparison; and, second, the SSLP Control group made greater gains than the Control No SSLP in Arithmetic (MAT) at twelve months. Further, while there were no significant differences between K-3 and Control No SSLP, there were several differences between K-3 and SSLP Control, with the latter having made greater gains in the area of Reading (MAT) at the twelve month comparison.

C. The summer instruction seems to be beneficial to bilingual students in another respect. The students enrolled in the SSLP are there because they have been identified as students needing remedial help yet they, at twelve months, had made greater gains than the K-3 group in Reading and Word Knowledge. They had also made greater

gains than the regular Control in Arithmetic.

D. Summer instruction seems to pay off in another area. At the nine months comparison, the Control group having had Head Start Preschool experience made greater gains in various areas. During the twelve month comparison this influence is reduced to one area. In essence, what seems to be happening is that the SSLP acts as a post-year Head Start program.

III. Preschool Experience

A. The only preschool experience that appears to be significant is the Head Start program. However, as mentioned previously, it appears to be significant only during the first year (nine months). Very little differences in favor of the Head Start program were found during the twelve month comparison. None were found for the second grade groups. The reader should use caution at this point in trying to evaluate the benefits of the K-3 Kindergarten experience. It could be that the traditional measures used in this study are not valid for the new approaches and objectives of the K-3 Kindergarten program. This needs to be analyzed further and appropriate instruments designed to tap the K-3 Kindergarten experience fully.

It could also be that the irregular teaching procedures which school administrators were forced to employ to maintain the four kindergarten classes interrupted the continuity of the instructional program to the degree that the childrens' progress was seriously affected. [In 1968-69 kindergarten classes were taught by different teams of college co-op

students each semester. Each kindergarten class had a minimum of five teachers during the year].

IV. Pupil Adjustment

A. The study did not reveal any significant differences in pupil adjustment. This is in keeping with the findings of the first year report. It is the opinion of the researchers that this is not due to the program effects but rather due to instrument invalidity. The researchers feel that the findings are limited because of the tendency of the raters' (classroom teachers) failure to discriminate between pupils consistently. More specifically, the raters seem to fall into a mental lock and thus give a given rating pattern to the majority of the students. This phenomenon is encouraged by a lack of fixed standards and criteria which would enable similar interpretation of behavior patterns. While this was suspected last year, it was found out too late to change instruments because the ratings had already been done. In light of this factor it is strongly recommended that new instruments be devised to correct these problems.

V. Parental-School Contacts

A. While the study revealed that K-3 parents had significantly more contacts than parents of the Control group, the data is limited in that the meaning or value of these contacts were not tapped. The researchers feel that this is an area that deems greater attention because, while the contacts were significantly different, the attitudes of parents toward education were not significant. The researchers recognize that the parents responding did so on a voluntary basis and that

there might be some bias. Never-the-less, a lack of significant differences on parent attitude toward education would suggest a closer look at this relationship.

APPENDICES

A

PARENT ATTITUDES TOWARD EDUCATION SCALE

	Strongly Agree	Agree	Don't know Uncertain	Disagree	Strongly Disagree
1. Children should listen to the teacher and do what she says.					
2. Most teachers have pets.					
3. The school is often to blame when students don't like school.					
4. Some of my teachers helped me to be a better person.					
5. It seems to me now that my teachers did not know what they were talking about.					
6. I would like to see Spanish taught in the schools.					
7. Too much play goes on in school these days.					
8. Most teachers treat the children in their classrooms fairly.					
9. We have little to say as to what will happen to us in life.					
10. Most teachers teach because they like children.					
11. Teachers do not make the pupils behave as well as they should.					
12. Parents and school must work together to help the child with school matters.					
13. Teaching Spanish in the schools makes it harder for the child to learn good English					
14. Going to school is a worthwhile experience					
15. Most people will learn more by working four years than by going to school four years.					
16. Many teachers are more interested in themselves than they are in teaching children.					

	Strongly Agree	Agree	Don't know Uncertain	Disagree	Strongly Disagree
17. Many teachers do not explain enough in their teaching.					
18. There are times when teachers can't be blamed for getting mad with a child.					
19. Schools do a good job in working with parents.					
20. Some boys and girls are always unlucky in school.					
21. Schools are the strength of American Democracy.					
22. It does not hurt for pupils to miss school once in a while.					
23. Our schools should teach more about the history of the Southwest.					
24. Many of the things I learned in school I still like to do.					
25. The main reason I can see for going to school is that the law makes children go.					
26. If a child does not do well in learning to read, most of the time it is because of the teacher.					
27. Schools are not teaching reading as well as they used to.					
28. If children listened to everything their teachers told them they could get all mixed up.					

	Strongly Agree	Agree	Don't know Uncertain	Disagree	Strongly Disagree
29. When I look back on my school years I feel they were well spent.					
30. Many people go into teaching simply because they like to boss others.					
31. The best way to get a good job is to get a good education.					
32. A longer school year gives a child a better chance to learn.					
33. The boys and girls who like school most are usually sissies or teachers' pets.					
34. Visiting my child's school is worth my time.					
35. I want my child to like school.					
36. Some teachers are so mean you cannot blame boys and girls for talking back or not minding them.					
37. What is going to happen to us will happen so it does not matter how much education we have.					
38. Many children would be better off if they left school after the eighth grade.					
39. Schools teach a lot of things that do not work out when you get on the job.					
40. Parents should back up the school in matters of child behavior.					
41. I never could seem to get to school on time.					

	Strongly Agree	Agree	Don't know Uncertain	Disagree	Strongly Disagree
42. Many school principals boss children too much.					
43. Teachers usually do the best they can in trying to teach what they should be teaching.					
44. My years in school did little to help me in what I'm now doing.					
45. Meetings of parents with school teachers, counselors, or principals is a waste of time.					
46. I feel welcome at school.					
47. Having the children go to school in the summer is asking children to do too much.					
48. Some teachers ask parents too much about how they treat the child at home.					
49. Schools should take more time than they do teaching boys and girls how to be useful citizens.					
50. Most schools do not let the parents know enough about what is going on.					
51. It seems to me that the public money which is put into schools today is well worth it.					
52. The schools are doing a good job today.					
53. I like to have teachers visit my home.					

PARENT INFORMATION

School: Bradley ____
Lucero ____
Mesilla ____
Washington ____

B. You are: Male ____
Female ____

C. Your child is in the K-3 program: Yes ____
No ____

D. Your child is in grade: Kindergarten ____ Second ____
First ____ Third ____

E. Your age: 20-25 ____ 30-35 ____ 40-45 ____ 50-55 ____
25-30 ____ 34-40 ____ 45-50 ____ 55-60 ____

F. Check the highest grade you completed in school:
5 ____ 9 ____ College 1 ____ below 6th grade ____
7 ____ 10 ____ 2 ____ 5 ____
8 ____ 11 ____ 3 ____ 6 ____
12 ____ 4 ____

G. Check the age of each child in your family:
1 ____ 6 ____ 11 ____ 16 ____ 21 ____
2 ____ 7 ____ 12 ____ 17 ____ 22 ____
3 ____ 8 ____ 13 ____ 18 ____ 23 ____
4 ____ 9 ____ 14 ____ 19 ____ 24 ____
5 ____ 10 ____ 15 ____ 20 ____ 25 or over ____

H. What is your annual family income?
below $3000 ____ $5000-$7000 ____ $9000-$11000 ____
$3000-$5000 ____ $7000-$9000 ____ over $11000 ____

I. Does your spouse work? Yes ____ No ____

J. If yes, what is the occupation of your spouse? _____

K. What is your occupation? _____

LAS CRUCES PUBLIC SCHOOL DISTRICT #2 C
Las Cruces, New Mexico

Title III, ESEA

PUPIL BEHAVIOR RATING SCALE

Student's name _____ Teacher _____ Date _____

1. Adapts easily to new situations, feels comfortable in new settings, enters easily into new activities.

_____usually _____sometimes _____seldom

2. Encounters failure or other strong stresses without displaying such behaviors as pouting, whining, withdrawing or hostile aggression.

_____usually _____sometimes _____seldom

3. Attempts to express ideas without undue hesitation or extreme caution.

_____usually _____sometimes _____seldom

4. Is chosen for activities by his classmates; his companionship is sought and valued.

_____usually _____sometimes _____seldom

5. Cooperates in group situations. Accepts his role as a participating member. This acceptance of responsibility applies to doing school work required as well as participating in other group activities.

_____usually _____sometimes _____seldom

6. Displays independence and self-confidence. Does not seek a great deal of support and reassurance from peers or teacher, as evidenced by seeking their nearness or frequent inquiries as to whether he is doing well.

_____usually _____sometimes _____seldom

7. Abides by school rules and regulations. Is able to accept corrections or criticism without becoming very agressive or very sullen and withdrawn.

_____usually _____sometimes _____seldom

8. Appears satisfied with his progress in school. Does not deprecate his school work, grades, activities, and work products.

_____usually _____sometimes _____seldom

9. Shows confidence and assurance in his actions toward his teachers and classmates.

_____usually _____sometimes _____seldom

10. Exhibits a strong sense of self esteem, self respect, and appreciation of his own worth.

_____usually _____sometimes _____seldom

11. Displays a good adjustment with peers. Is not a bully nor is he passive in his relationship with peers.

_____usually _____sometimes _____seldom

LAS CRUCES PUBLIC SCHOOL DISTRICT #2
Las Cruces, New Mexico

Title III, RSEA

RECORD

OF

PARENT PARTICIPATION

Parent Name: _____ Date: _____

Teacher: _____

Please check the approximate amount of participation by this parent.

	None	1-2	3 or more
Number of conferences	____	____	_____
Number of telephone conferences	____	____	_____
Number of PTA meetings attended	____	____	_____
Number of classroom visitations	____	____	_____

	None	1-2	3 or more
Number of home visitations by teacher	____	____	_____